

TREE PLANTING AND STAKING DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Ma R. Bourstin*
 CITY ENGINEER
 Date: 3/24/16

Date: March 2016		Revisions	
No.	Date	App.	Description

Scale:
 NTS
 Drawing
 L-1

- ① (2) PAIRS OF CORDED RUBBER TIES IN A FIGURE 8 PATTERN ATTACHED TO STAKE WITH 2 GALVANIZED ROOFING NAILS. LOCATION VARIES BY SPECIES.
- ② 2-3" DIA. X 8' OR 10' LONG PINE LODGE POLE STAKE. PLACE OUTSIDE OF ROOTBALL PERPENDICULAR TO THE PREVAILING WIND. STAKES MUST BE PLUMB. STAKES TO BE NO CLOSER THAN 4" NOR FARTHER THAN 16" FROM THE TREE TRUNK.
- ③ ROOT BALL: TREES SHALL NOT BE ROOTBOUND. SCARIFY ROOTBALL BEFORE PLANTING. PLANT TREE WITH ROOT CROWN 2" ABOVE EXISTING GRADE.
- ④ PROVIDE BERM AROUND TREE FOR WATER BASIN. DO NOT TO EXCEED HEIGHT OF ROOT CROWN. REMOVE BERM IN LAWN AREA AFTER INITIAL WATERING. MULCH TREE WELL WITH 3" LAYER OF MULCH. KEEP MULCH AWAY FROM TREE TRUNK.
- ⑤ FINISH GRADE.
- ⑥ BACKFILL MATERIAL: ORGANIC AMENDMENT PER STANDARD SPECIFICATIONS.
- ⑦ HOLE SIZE: SHALL BE 18" WIDER THAN ROOTBALL OR 2 TIMES WIDTH OF ROOTBALL, WHICHEVER IS GREATER. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE. DEPTH SHALL BE EQUAL TO ROOTBALL.
- ⑧ INSTALL 1' X 4' REDWOOD BRACE ON THE WINDWARD SIDE OF STAKES FOR ADDITIONAL SUPPORT. PLACE CUSHING MATERIAL ON STAKE TO PROTECT BARK. NOT REQUIRED FOR CONIFEROUS EVERGREENS, UNLESS OTHERWISE DIRECTED.
- ⑨ TREES SHALL BE LOCATED SO THEY ARE 3'-0" CLEAR OF ALL PEDESTRIAN PATHWAYS AND PAVEMENT, 2'-0" MINIMUM IN MEDIANS WITH AN INSIDE WIDTH OF 4'-0" MINIMUM.
- ⑩ AUGERED DRY WELL. USE FOR ALL TREES IN TURF AREAS UNLESS SPECIFIED OTHERWISE BY PROJECT HORTICULTURALIST.
- ⑪ TREE STAKE HEIGHT ABOVE GRADE SHALL BE APPROVED BY CITY REPRESENTATIVE FOR EACH SPECIES. 6' MINIMUM FOR SINGLE TRUNK TREES; 4' MINIMUM FOR LOW BRANCHING TREES.

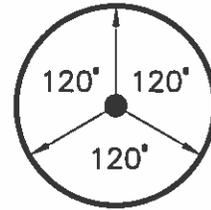
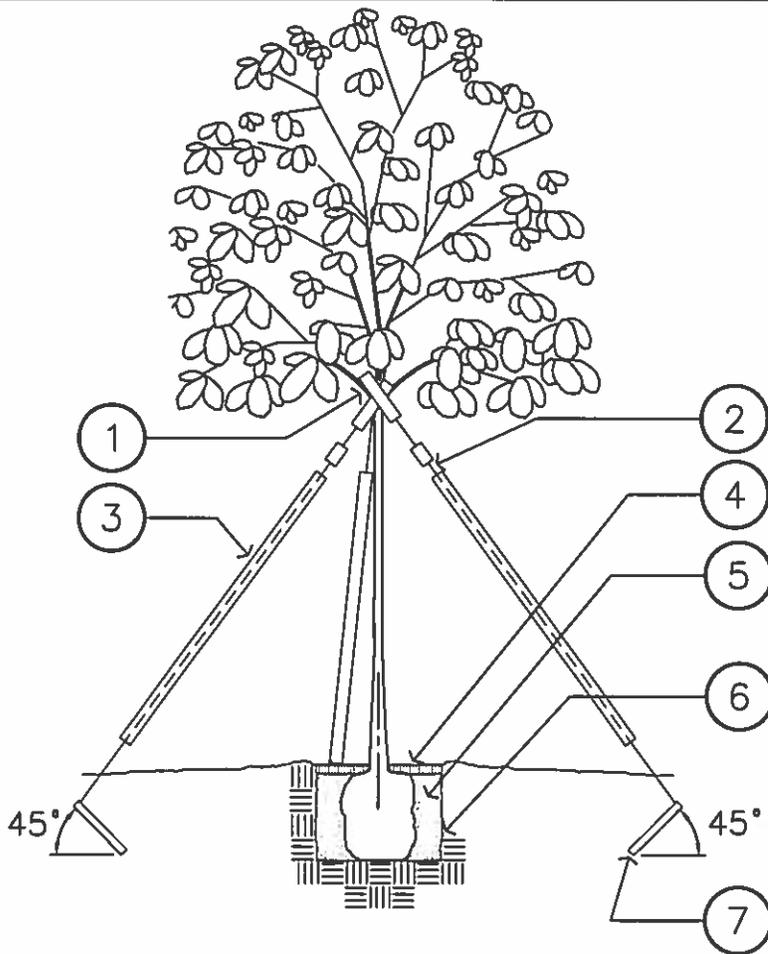
NOTES:

- A. TREES MUST HAVE AN UN CUT LEADER THAT HAS A UNIFORM TAPER FROM BASE TO TIP. TREES MUST MEET AT LEAST NORMAL CALIPER AND HEIGHT FOR CONTAINER SIZE. OVERGROWN TREES ARE NOT ACCEPTABLE. ROOT CONTROL BARRIER MUST BE USED IF TREE IS PLANTED WITHIN 5' OF A CURB OR SIDEWALK. SEE ROOT BARRIER DETAIL.
- B. TREES TO BE PLANTED IN MEDIANS AND INTERSECTION SHALL BE REVIEWED AND APPROVED BY PUBLIC WORKS DEPARTMENT-ENGINEERING DIVISION FOR MINIMUM SIGHT VISIBILITY STANDARDS, OR PLANTED PER APPROVED PLANS.



TREE PLANTING AND STAKING DETAIL (CONT.)

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault <i>JG</i>	Revisions	NTS
Approved by: <i>David Bouter</i>	No. Date App. Description	Drawing
CITY ENGINEER		L-1A
Date: 3/14/16		



Plan

- ① CORDED RUBBER TIE
- ② #10 3-STRAND WIRE WITH TURNBUCKLE, 3 PER TREE, EQUALLY SPACED
- ③ 1/2" PVC SLEEVE
- ④ 3" LAYER MULCH BERM FOR WATERING BASIN NOT TO EXCEED HEIGHT OF ROOT CROWN
- ⑤ BACKFILL MIX
- ⑥ PLANTING HOLE
- ⑦ STEEL GUY ANCHOR IN UNDISTURBED SOIL

NOTES:

- A. WHEREVER POSSIBLE, LOCATE GUY ANCHORS 2'-0": MIN. FROM EDGE OF PAVING AND PLACE TO AVOID HAZARD TO PEDESTRIANS.
- B. ROOT CROWN SHALL BE 2" ABOVE FINISH GRADE .
- C. SEE STANDARD SPECIFICATIONS & TREE PLANTING AND STAKING DETAIL.

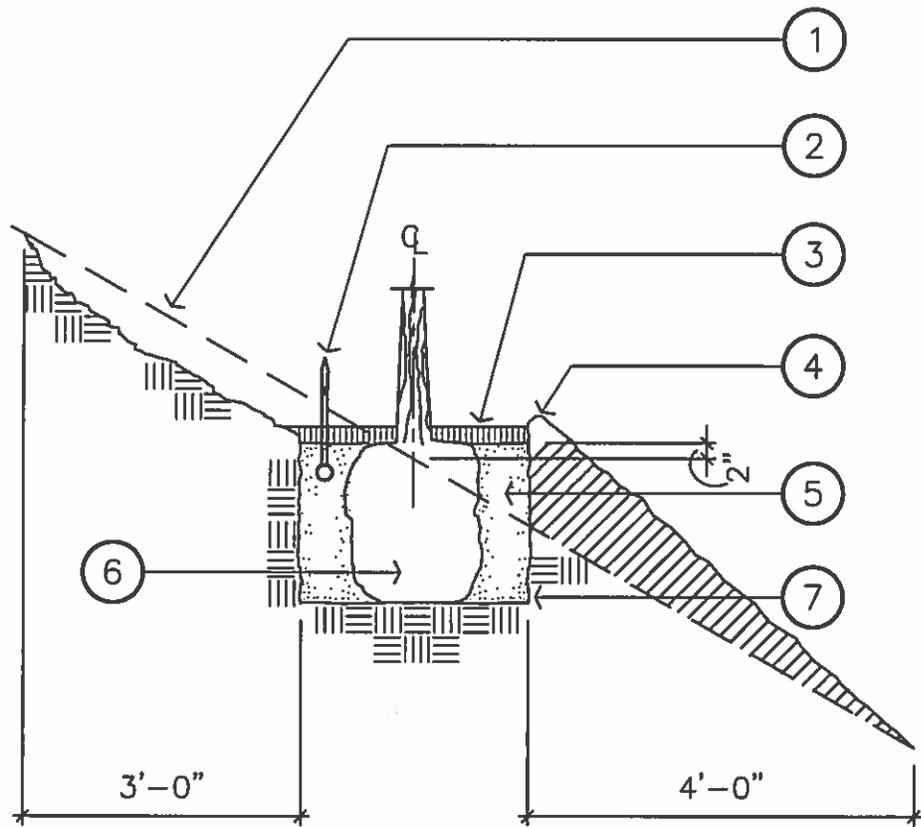
TREE GUYING DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *John R. Boudier*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Revisions	
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- ① EXISTING SLOPE
- ② IRRIGATION HEAD
- ③ FIR BARK MULCH
- ④ EARTH BERM NOT TO EXCEED HEIGHT OF ROOTCROWN
- ⑤ BACKFILL MIX
- ⑥ ROOTBALL
- ⑦ PLANTING HOLE

NOTE: SEE TREE PLANTING & STAKING DETAIL

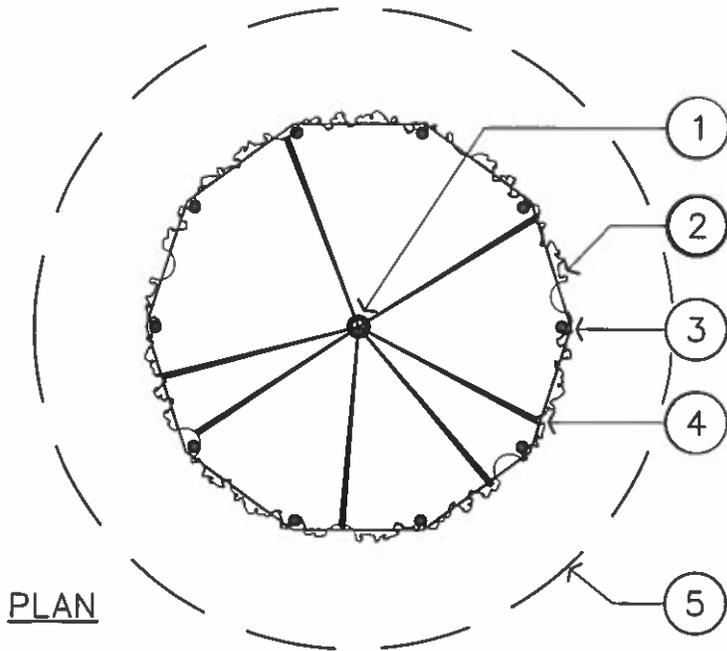
TREE & SHRUB PLANTING ON SLOPES DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Ben R. Boardman*
 CITY ENGINEER
 Date: 3/14/16

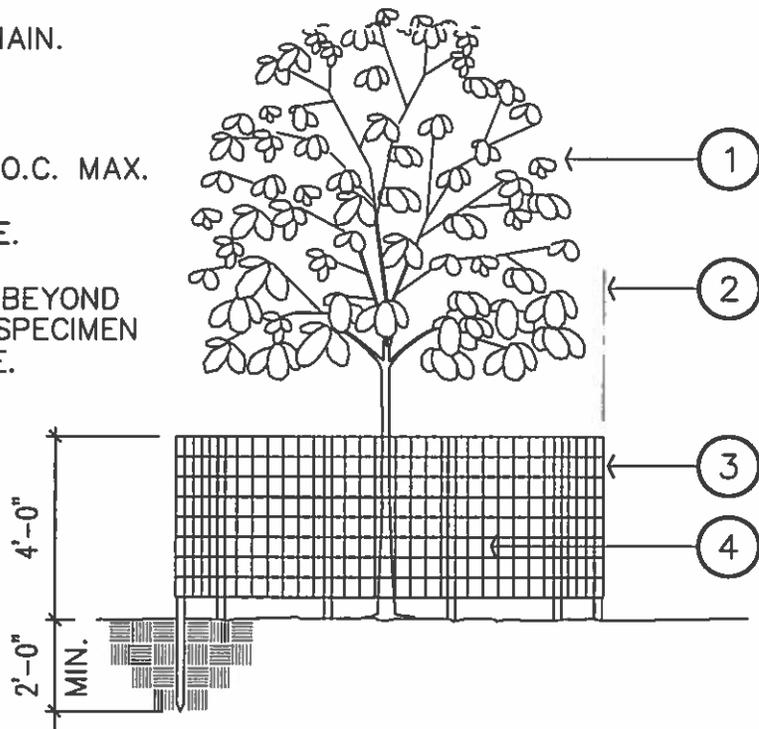
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Drawing L-3



PLAN

- ① EXISTING TREE TO REMAIN.
- ② DRIP LINE.
- ③ STEEL STAKE, 6'-0" O.C. MAX.
- ④ ORANGE SAFETY FENCE.
- ⑤ EXTEND FENCING 50% BEYOND DRIPLINE OF MATURE SPECIMEN OAKS WHERE POSSIBLE.



ELEVATION

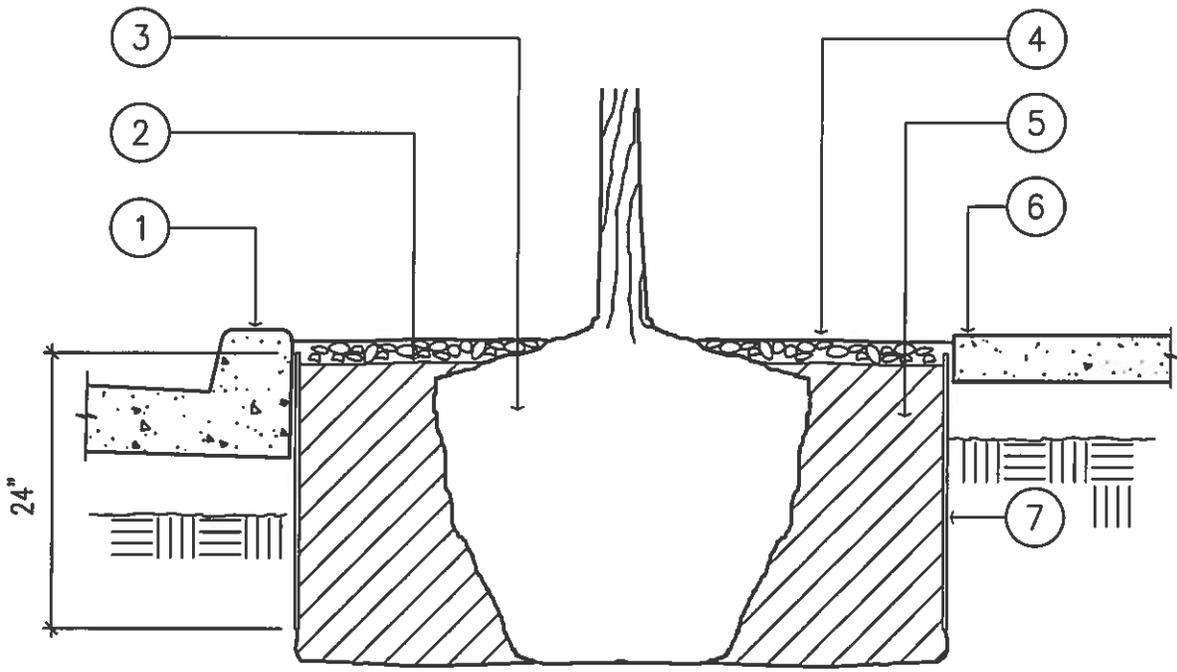
PROTECTIVE FENCING DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Brian R. Boursten*
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Scale: NTS
 Drawing L-4



- ① CURB
- ② FINISH GRADE
- ③ ROOTBALL
- ④ 3" LAYER OF MULCH
- ⑤ BACKFILL
- ⑥ SIDEWALK
- ⑦ ROOT BARRIER – DEEP ROOT CORP., MODEL UB24-2 OR EQUAL WITH GROUND LOCKS. INSTALL AGAINST PAVING AND 1-1/2" TO 2" BELOW TOP OF CONCRETE. ROOT BARRIER SHALL BE LINEAR, 10" LONG FROM CENTERLINE OF TREE (20' OVERALL LENGTH).

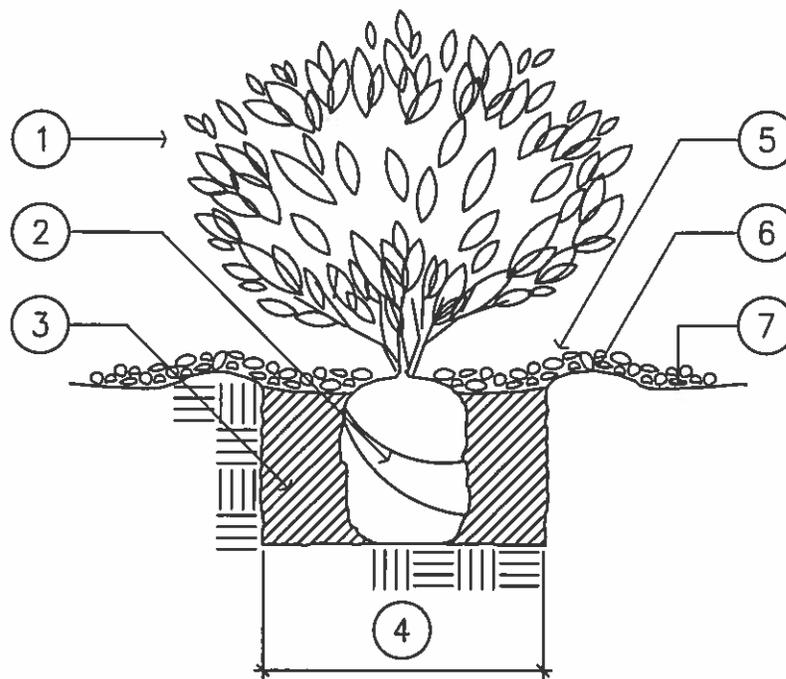
NOTES:

- A. PROVIDE ROOT BARRIER FOR ANY TREE LOCATED WITHIN 5' OF CURB, PAVING, OR WALLS.
- B. SEE TREE PLANTING & STAKING DETAIL FOR MORE INFORMATION.



ROOT BARRIER DETAIL

Drawn by: SP/ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	Drawing L-5
Approved by: <i>Thomas R. Broun</i> CITY ENGINEER	No. Date App. Description	
Date: 3/10/16		



- ① SHRUB OR 1 GALLON GROUND COVER
- ② ROOT BALL: SCARIFY ROOT BALL BEFORE PLANTING. SET ROOT CROWN 2" ABOVE EXISTING GRADE.
- ③ BACKFILL: ORGANIC AMENDMENT PER STANDARD SPECIFICATIONS
- ④ HOLE SIZE: 2 TIMES WIDTH OF ROOT BALL. SCARIFY SIDES AND BOTTOM OF PLANTING HOLE. DEPTH SHALL BE EQUAL TO ROOT BALL.
- ⑤ MULCH: DEPTH AS SPECIFIED. KEEP AWAY FROM TRUNK.
- ⑥ WATER BASIN: NOT TO EXCEED HEIGHT OF ROOT CROWN. OMIT FOR NATIVES IN FLAT AREAS.
- ⑦ FINISH GRADE

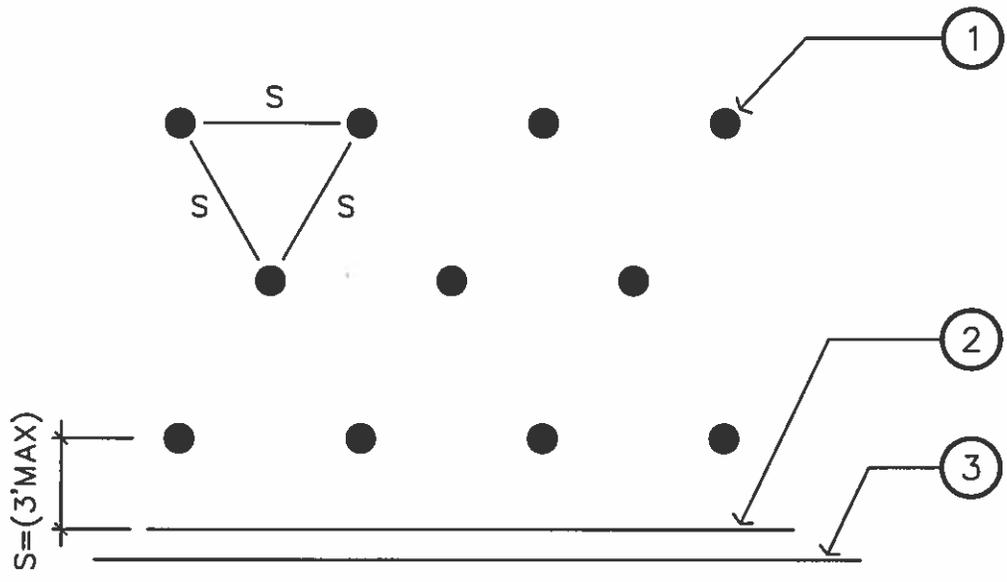
NOTE:

SHRUBS TO BE PLANTED IN MEDIANS SHALL BE REVIEWED AND APPROVED BY PUBLIC WORKS DEPARTMENT—ENGINEERING DIVISION FOR MINIMUM SIGHT VISIBILITY STANDARDS OR PLANTED PER APPROVED PLANS.



SHRUB PLANTING DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
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Approved by: <i>Brian R. Bourdier</i>	No. Date App. Description	Drawing
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Date: 3/14/16		



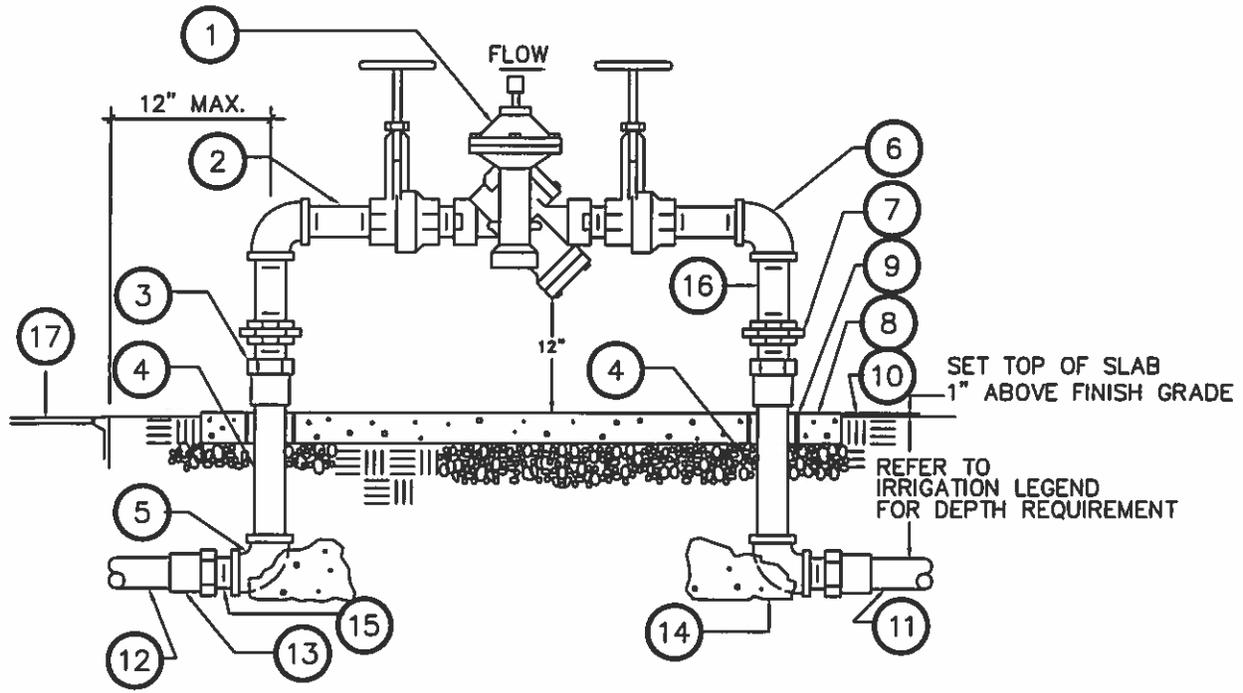
- ① PLANTING LOCATION
- ② BACK OF CURB
- ③ FACE OF CURB

NOTES:

- A. S = PLANT SPACING DISTANCE ON CENTER
- B. FOR USE AS A GUIDE FOR SHRUBS AND GROUNDCOVER WHEN PLANTS ARE SPACED EQUIDISTANT FROM EACH OTHER.
- C. USE LARGER ON CENTER SPACING AT INTERFACE BETWEEN SPECIES.

PLANT QUANTITY CHART	
SPACING	PLANTS/SQ.FT.
6" O.C.	4.60
8" O.C.	2.60
10" O.C.	1.66
12" O.C.	1.15
15" O.C.	.738
18" O.C.	.512
24" O.C.	.290
30" O.C.	.185
36" O.C.	.116
48" O.C.	.072
36" O.C.	.046
72" O.C.	.032

	PLANT SPACING DETAIL			Scale: NTS Drawing L-7		
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Date: 3/14/14						



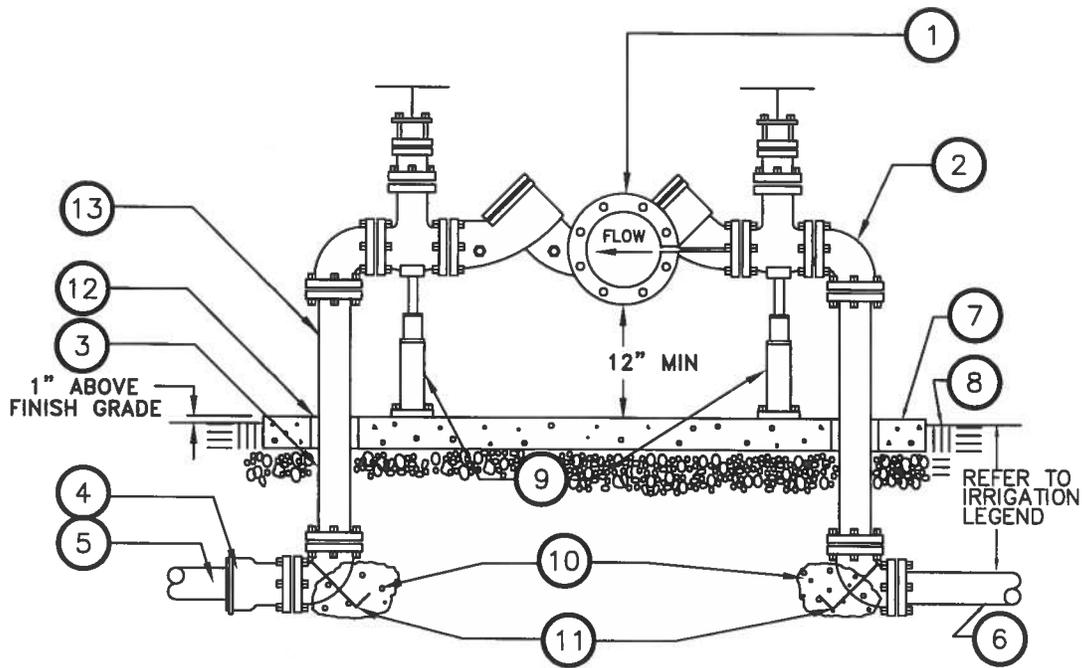
- ① REDUCED PRESSURE BACKFLOW ASSEMBLY WITH BALL VALVE SHUT OFFS
- ② BRASS CLOSE THREADED NIPPLE (4 TOTAL)
- ③ WROT COPPER MALE ADAPTER - 2 TOTAL (SOLDER X THREAD CONNECTION)
- ④ COPPER TYPE "K" PIPE (LENGTH AS REQUIRED) (2 TOTAL)
- ⑤ WROT COPPER 90 ELBOW - 2 TOTAL (SOLDER X THREAD CONNECTION)
- ⑥ BRASS 90 ELBOW - 2 TOTAL (FIPT CONNECTION)
- ⑦ BRASS UNION - 2 TOTAL (FIPT CONNECTION)
- ⑧ CONCRETE PAD - SEE BACKFLOW PREVENTER ENCLOSURE DETAIL I-3
- ⑨ PVC SLEEVE (BOTH SIDES)
- ⑩ FINISH GRADE
- ⑪ PVC MAIN LINE TO IRRIGATION SYSTEM
- ⑫ PVC MAIN LINE TO POINT OF CONNECTION
- ⑬ SCHEDULE 80 PVC MALE ADAPTER - 2 TOTAL
- ⑭ CONCRETE THRUST BLOCK (TYP.)
- ⑮ BUSH AS NECESSARY FOR SIZE TRANSITION
- ⑯ INSTALL PRESSURE REGULATING VALVE IN THIS SEGMENT OF ASSEMBLY WHERE NECESSARY TO CONTROL SYSTEM PRESSURE
- ⑰ WATER METER BOX

- NOTES:
- A. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS BACKFLOW ASSEMBLY.
 - B. DO NOT SOLDER CONNECT FITTINGS WHILE THREADED INTO BACKFLOW ASSEMBLY. DAMAGE MAY OCCUR.
 - C. PROVIDE ENCLOSURE AS DETAILED.
 - D. PROVIDE POLAR PARKA (OR EQUAL) INSULATED JACKET AS DETAILED.



2" AND SMALLER BACKFLOW ASSEMBLY DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
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Approved by: <i>Paul R. Porter</i>	No. Date App. Description	Drawing
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- ① REDUCED PRESSURE BACKFLOW ASSEMBLY
- ② D.I. 90 ELL (FLANGE X FLANGE) - 4 TOTAL
- ③ D.I. SPOOL (2 TOTAL)
- ④ D.I. ADAPTER (FLANGE & GASKET)
- ⑤ PVC MAIN LINE TO IRRIGATION SYSTEM
- ⑥ D.I. MAIN LINE TO WATER METER
- ⑦ CONCRETE PAD - SEE BACKFLOW PREVENTER ENCLOSURE DETAIL 1-3
- ⑧ FINISH GRADE
- ⑨ B-LINE #3093 (OR EQUAL) ADJUSTABLE SADDLE SUPPORT (2 TOTAL) INSTALL PER MFR.
- ⑩ CONCRETE THRUST BLOCK AS DETAILED AT BOTH SIDES OF ASSEMBLY
- ⑪ #4 REBAR-BEND OVER ELBOW WITH "L" BENDS AT ENDS OF REBAR SECURED IN THRUST BLOCK (BOTH SIDES)
- ⑫ PVC SLEEVE (BOTH SIDES)
- ⑬ INSTALL PRESSURE REGULATING VALVE IN THIS SEGMENT OF ASSEMBLY TO CONTROL SYSTEM PRESSURE

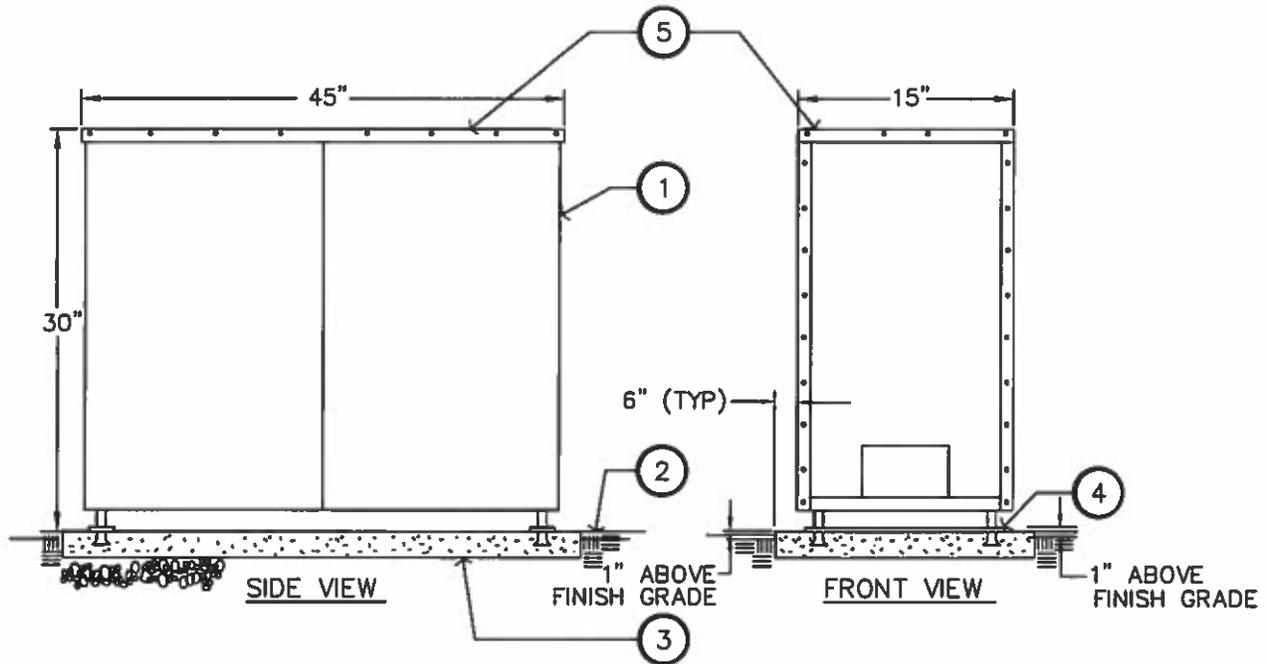
NOTES:

- A. RISER ASSEMBLY SPOOLS AND FITTINGS SHALL MATCH THE SIZE OF THE BACKFLOW PREVENTER. USE STAINLESS STEEL BOLTS, WASHERS & NUTS.
- B. ALL DUCTILE IRON PIPE & FITTING BELOW GRADE SHALL BE ENCASED WITH APPROVED POLYETHYLENE WRAP.
- C. INSTALL IN ENCLOSURE - REFER TO BACKFLOW PREVENTER ENCLOSURE DETAIL.
- D. PROVIDE POLAR PARKA (OR EQUAL) INSULATED JACKET AS DETAILED.



2-1/2" AND LARGER BACKFLOW ASSEMBLY DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
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- ① ALUMINUM ENCLOSURE INSULATED OR WITH INSULATED BLANKET.
- ② FINISH GRADE.
- ③ 6" THICK CLASS CSR 6 SACK CONCRETE MIX ON 6" COMPACTED CLASS II AGGREGATE BASE. ENCLOSURE PAD TO EXTEND 6" BEYOND ENCLOSURE ON FOUR SIDES. CONCRETE TO HAVE BRUSH FINISH. PEAK IN CENTER TO DRAIN IN ALL DIRECTIONS.
- ④ STAINLESS STEEL BASE (STANDARD WITH ENCLOSURE) SET INTO CONCRETE PAD AS DIRECTED BY MANUFACTURER.
- ⑤ INSTALL LEVEL.

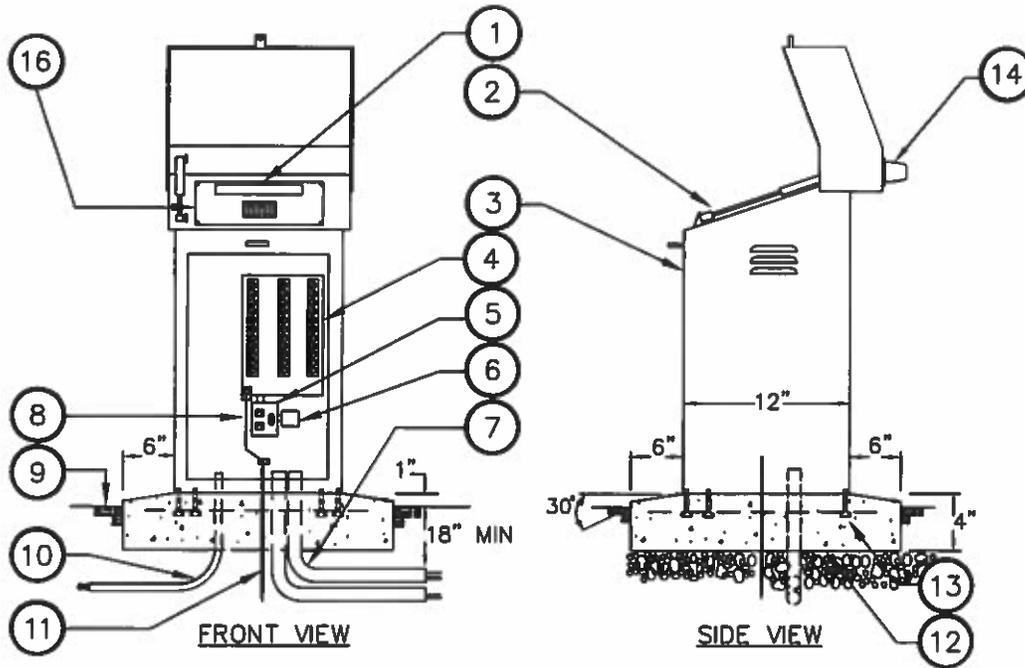
NOTES:

- A. THIS DETAIL APPLIES TO ENCLOSURES FOR 2" AND SMALLER BACKFLOW ASSEMBLIES. CONSULT WITH CITY ENGINEER OR IRRIGATION CONSULTANT FOR ENCLOSURE SPECIFICATIONS AND DETAILING FOR 2-1/2" AND LARGER BACKFLOW ASSEMBLIES.
- B. PROVIDE AND INSTALL BACKFLOW ENCLOSURE APPROPRIATELY SIZED MODEL NO. SBBC-45 ALI INCLUDES INSULATION BLANKET BY V.I.T. (800) 729-1314 OR APPROVED EQUAL.

BACKFLOW PREVENTER ENCLOSURE DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
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- ① CALSENSE STAINLESS STEEL CONTROLLER PANEL MOUNTED FLUSH ON FACE OF ENCLOSURE AT 25 DEGREE ANGLE FOR EASY ACCESS AND VIEWING.
- ② PISTON CONNECTED TO FLIP TOP.
- ③ CALSENSE STAINLESS STEEL CONTROLLER ENCLOSURE AS SPECIFIED.
- ④ TP-1 TRANSIENT PROTECTION BOARD.
- ⑤ GFI OUTLET AND SWITCH.
- ⑥ SURGE PROTECTOR.
- ⑦ SCHEDULE 40 GREY PVC ELECTRICAL CONDUITS WITH SWEEP ELL FOR LOW VOLTAGE WIRE AND COMMUNICATION CABLE. EXTEND CONDUIT TO FLOW METER AND MASTER VALVE.
- ⑧ #8 AWG GROUNDING WIRE.
- ⑨ FINISH GRADE.
- ⑩ 120 VOLT ELECTRICAL SERVICE PER LOCAL CODES.
- ⑪ 5/8" X 8' LONG COPPER CLAD GROUNDING ROD WITH GROUNDING CLAMP FOR GROUND WIRE PER STANDARD SPECIFICATIONS.
- ⑫ 4" THICK CONCRETE SLAB OVER 4" COMPACTED AGGREGATE BASE. EXTEND 6" BEYOND ALL SIDES OF ENCLOSURE AND SLOPE AS SHOWN.
- ⑬ STEEL TEMPLATE WITH MOUNTING BOLTS ATTACHED (INCLUDED WITH ENCLOSURE) SET IN CONCRETE BASE.
- ⑭ RADIO ANTENNA (WHERE SPECIFIED).
- ⑮ INSTALL ENTIRE ASSEMBLY LEVEL.
- ⑯ CALSENSE CONTROLLER MODEL AS SPECIFIED.

NOTE: ENTIRE CONTROLLER AND ENCLOSURE ASSEMBLY IS TO BE PRE-ASSEMBLED BY CALSENSE. CONTACT LOCAL CALSENSE REPRESENTATIVE AT 925-325-9368 WITH QUESTIONS. SEE LEGEND FOR MODEL NUMBER. PROVIDE RECYCLED WATER TAG ON ENCLOSURE.



CONTROLLER ENCLOSURE DETAIL

Drawn by: SP/ER

Date: March 2016

Scale:

Checked by: Jeff Gault *JG*

Revisions

NTS

Approved by:

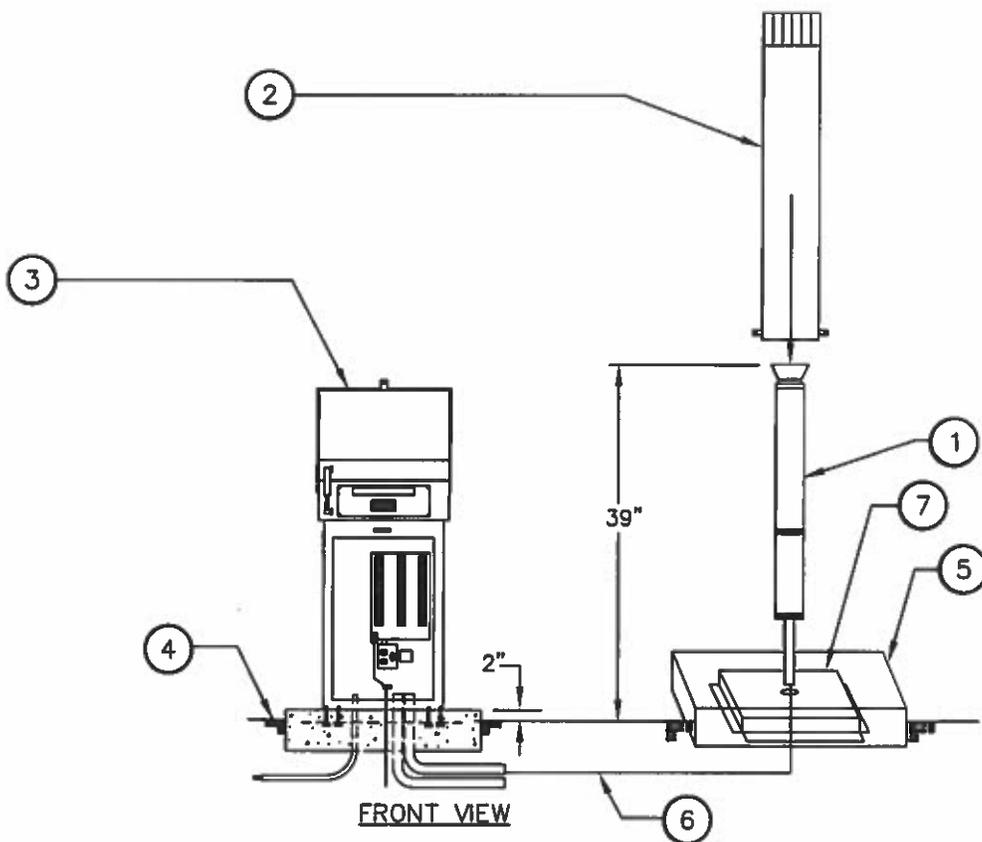
No. Date App. Description

Paul R. Brunster
CITY ENGINEER

Drawing

Date: 3/14/16

1-4



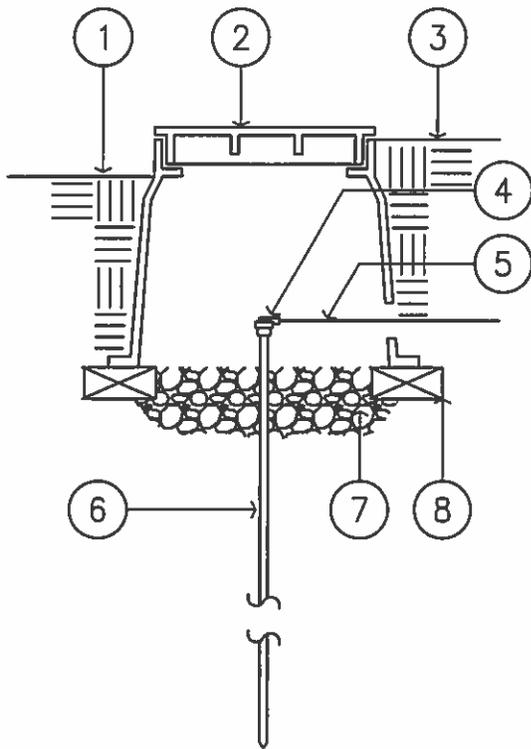
- ① CALSENSE ET GAGE MODEL #ETG. INSTALL UNDER DIRECTION OF CALSENSE MANUFACTURER'S REPRESENTATIVE.
- ② CALSENSE ET GAGE VANDAL RESISTANT ENCLOSURE MODEL #ETGE. SECURE TO CONCRETE BASE AS DIRECTED BY CALSENSE MANUFACTURER'S REPRESENTATIVE.
- ③ CALSENSE IRRIGATION CONTROLLER WITH ET GAGE INTERFACE AS SPECIFIED. SEE STAND ALONE CONTROLLER- ENCLOSURE DETAIL.
- ④ FINISH GRADE.
- ⑤ 18" SQUARE X 6" THICK CONCRETE MOUNTING. SLAB POURED WITH 3/4" PVC ELECTRICAL CONDUIT SWEEP FOR CABLE ACCESS.
- ⑥ PAIGE ELECTRIC CORP. CABLE NO. P-7172-D TO BE INSTALLED WITHIN 1" SCHEDULE 40 PVC CONDUIT BETWEEN IRRIGATION CONTROLLERS AND ET GAGE AS DIRECTED BY CALSENSE MANUFACTURER'S REPRESENTATIVE.
- ⑦ POUR CONCRETE 1" ABOVE METAL BASE OF ENCLOSURE.

NOTE: REFER TO IRRIGATION CONTROLLER CONSTRUCTION DETAIL, IRRIGATION PLANS, AND IRRIGATION SPECIFICATIONS FOR MORE INFORMATION REGARDING REQUIRED CONTROL SYSTEM COMPONENTS AND INSTALLATION PROCEDURES. UPON COMPLETION OF THE IRRIGATION CONTROLLERS AND FLOW METER, CONTACT CALSENSE REPRESENTATIVE AT (925) 325-9368 TO PERFORM A SITE VISIT TO VERIFY THE SYSTEM HAS BEEN PROPERLY INSTALLED PER MANUFACTURER'S INSTRUCTIONS. THE SYSTEM WILL NOT BE ACCEPTED UNTIL MANUFACTURER HAS INDICATED THAT THE INSTALLATION HAS BEEN INSTALLED CORRECTLY AND OPERATING SATISFACTORILY.

CONTROLLER/ET GAGE CONNECTION DETAIL



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- ① SET VALVE BOX 1-1/2" ABOVE FINISH GRADE IN SHRUB AREAS OR FLUSH WITH FINISH GRADE IN TURF AREAS
- ② PLASTIC VALVE BOX WITH T-COVER LOCKING LID
- ③ FINISH GRADE
- ④ CADWELD CONNECTION
- ⑤ 6 AWG SOLID BARE COPPER WIRE - 12" MINIMUM COVER AND AVOID KINKS OR BENDING
- ⑥ GROUND ROD - 8' LONG BY 5/8" DIAMETER COPPER CLAD ROD
- ⑦ 3/4" DRAIN ROCK - 6" DEEP MINIMUM
- ⑧ BRICK - 2 TOTAL

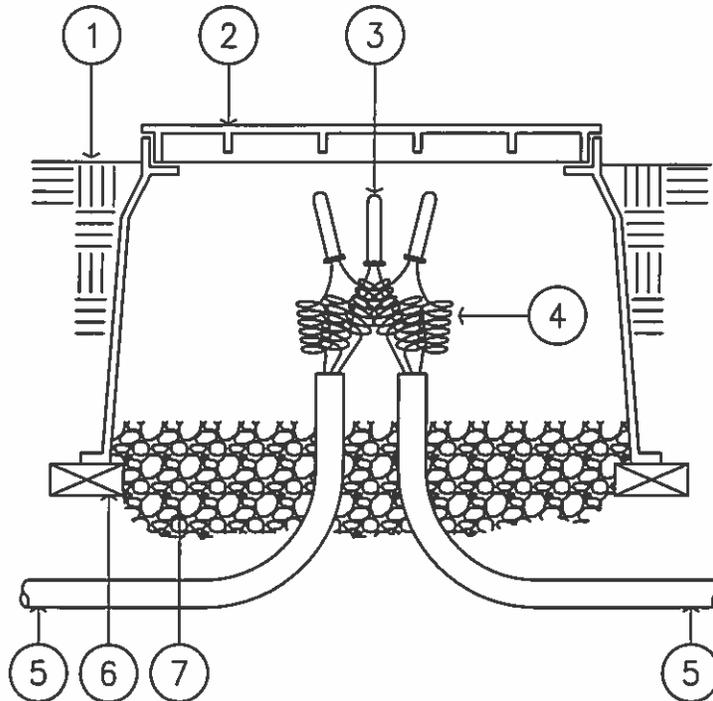
NOTES:

- A. GROUNDING SHALL MEET THE MINIMUM REQUIREMENTS OF THE CURRENT EDITION OF THE NATIONAL ELECTRIC CODE AND THE AMERICAN SOCIETY OF IRRIGATION CONSULTANTS GUIDELINE 100-2002 FOR EARTH GROUNDING ELECTRONIC EQUIPMENT IN IRRIGATION SYSTEMS.
- B. COVER BOX CUT-OUTS WITH 10 MIL PIPE TAPE TO PREVENT SOIL IN BOX.

GROUND ROD DETAIL



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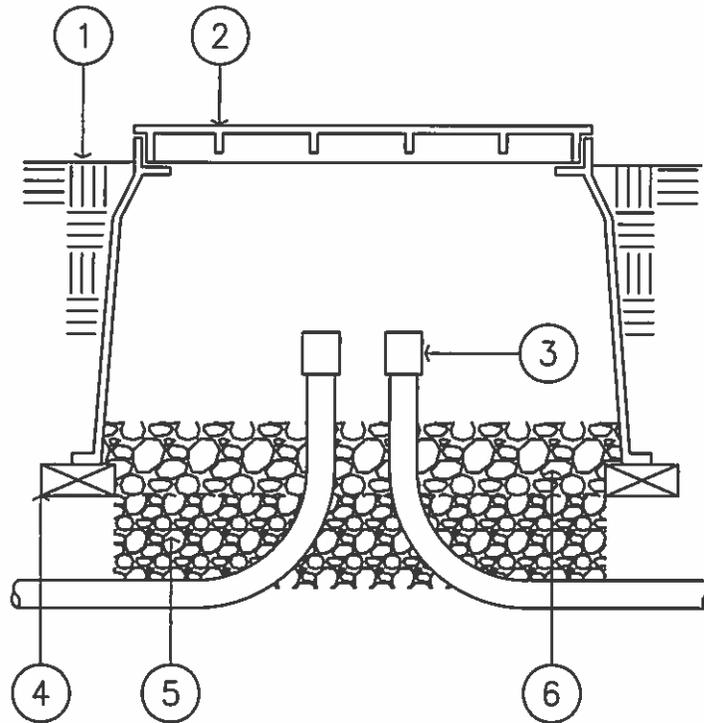
- ① SET VALVE BOX 1-1/2" ABOVE FINISH GRADE IN SHRUB AREAS OR FLUSH WITH GRADE IN TURF AREAS
- ② PLASTIC VALVE BOX WITH T-COVER LOCKING LID
- ③ 3M DBR/Y-6 DIRECT BURY SPLICE
- ④ VALVE CONTROL WIRE – PROVIDE 36" OF EXCESS WIRE IN A 1" DIAMETER COIL
- ⑤ SCHEDULE 40 PVC CONDUIT – FOR DEPTH REFER TO IRRIGATION LEGEND
- ⑥ BRICK – 1 EACH CORNER OF VALVE BOX
- ⑦ 3/4" DRAIN ROCK – 6" DEEP MINIMUM

NOTE: SPLICING WILL ONLY BE PERMITTED ON RUNS EXCEEDING 2,500 FEET UNLESS APPROVED OTHERWISE.

SPLICE BOX DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
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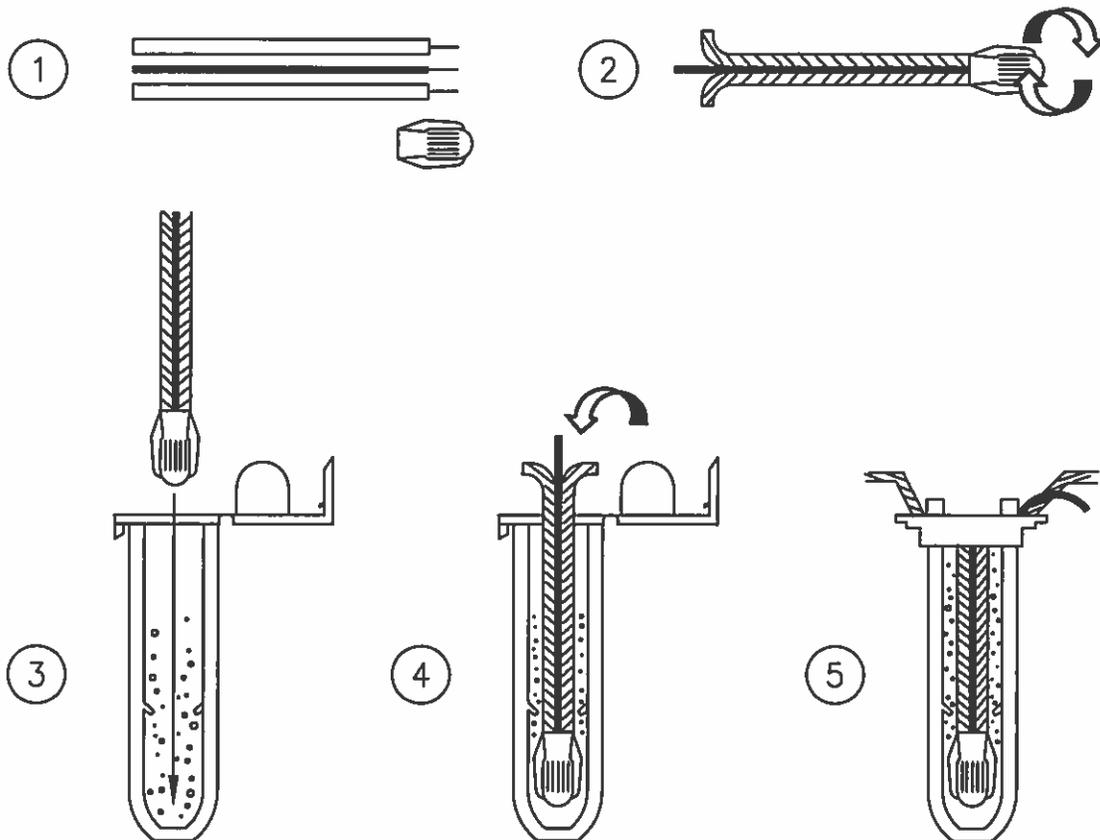
- ① SET VALVE BOX 1-1/2" ABOVE FINISH GRADE IN SHRUB AREAS OR FLUSH WITH GRADE IN TURF AREAS
- ② PLASTIC VALVE BOX WITH T-COVER LOCKING LID
- ③ SCHEDULE 40 PVC CONDUIT WITH BELL END FITTING – FOR DEPTH REFER TO IRRIGATION LEGEND
- ④ BRICK – 1 EACH CORNER OF VALVE BOX
- ⑤ 3/4" DRAIN ROCK – 6" DEEP MINIMUM
- ⑥ 1-1/2" TO 2" RIVER ROCK – 3" DEEP MINIMUM

NOTE: COVER BOX CUT-OUTS WITH 10 MIL PIPE TAPE TO PREVENT SOIL IN BOX.



PULL BOX ROD DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
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Approved by: <i>Brian R. Boudreau</i>	No. Date App. Description	Drawing
CITY ENGINEER		1-8
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INSTRUCTIONS:

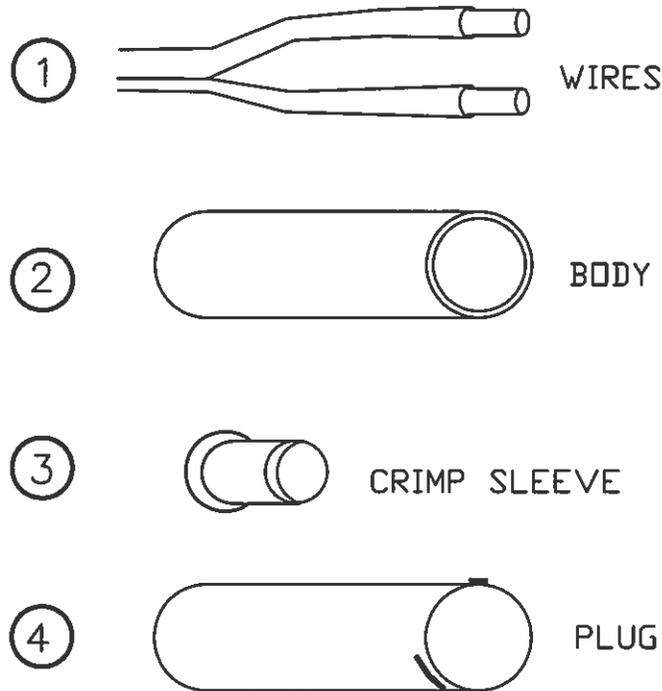
- ① STRIP INSULATION 3/4".
- ② WITH WIRE ENDS EVEN, INSERT WIRES INTO THE CONNECTOR AND TIGHTEN UNTIL SECURE.
- ③ INSERT THE CONNECTOR ALL THE WAY INTO THE TUBE UNTIL THE CONNECTOR RESTS ON THE BOTTOM.
- ④ FOLD THE WIRE INTO THE CHANNELS.
- ⑤ CLOSE THE CAP. INSPECT FINAL SPLICE ASSEMBLY TO BE SECURE AND FINISHED.

WATERPROOF SPLICE ASSEMBLY DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Brian R. Bantle</i>	No. Date App. Description	Drawing
CITY ENGINEER		1-9
Date: 3/18/16		

NOTE : FOR FLOW METERS ONLY



INSTRUCTIONS:

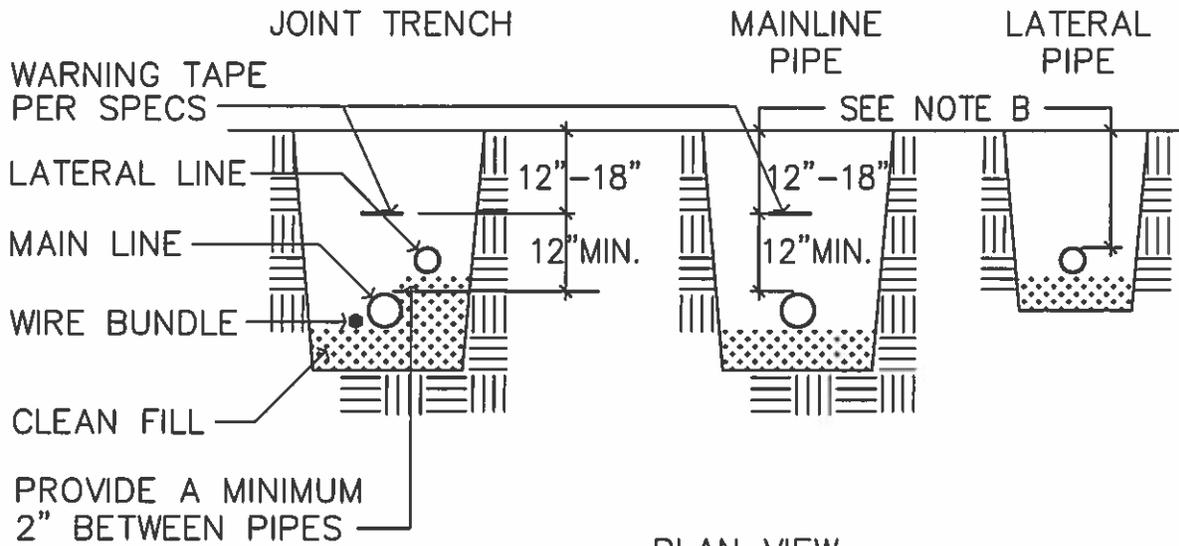
- ① INSERT WIRES THROUGH HOLES IN BASE OF BODY.
- ② TWIST STRIPPED WIRES TOGETHER AND APPLY CRIMP SLEEVE WITH AN INDENT TYPE CRIMPING TOOL. TRIM EXCESS BARE WIRE.
- ③ FILL PLUG TO BRIM WITH SPEARS DS-300 SEALANT.
- ④ INVERT BODY AND INSERT PLUG INTO BODY UNTIL IT SNAPS TIGHT.
- ⑤ PUSH WIRES ALL THE WAY INTO THE PLUG TO COMPLETELY SEAL THE CRIMP SLEEVE.
- ⑥ INSURE SEALANT HAS FORMED INTO ALL THE HOLES IN BODY.



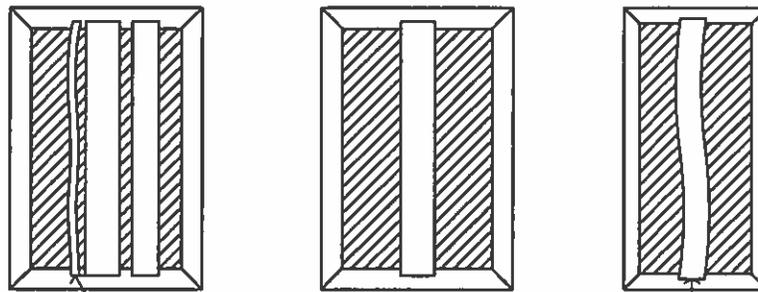
DS-100 DRI-SPLICE ASSEMBLY DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>David R. Boudreau</i>	No. Date App. Description	Drawing
CITY ENGINEER		I-10
Date: 3/14/16		

SECTION VIEW



PLAN VIEW



RUN WIRING BENEATH AND BESIDE MAINLINE. TAPE AND BUNDLE AT 10' INTERVALS

SOLVENT WELD PLASTIC PIPING TO BE SNAKED IN TRENCH AS SHOWN

NOTES:

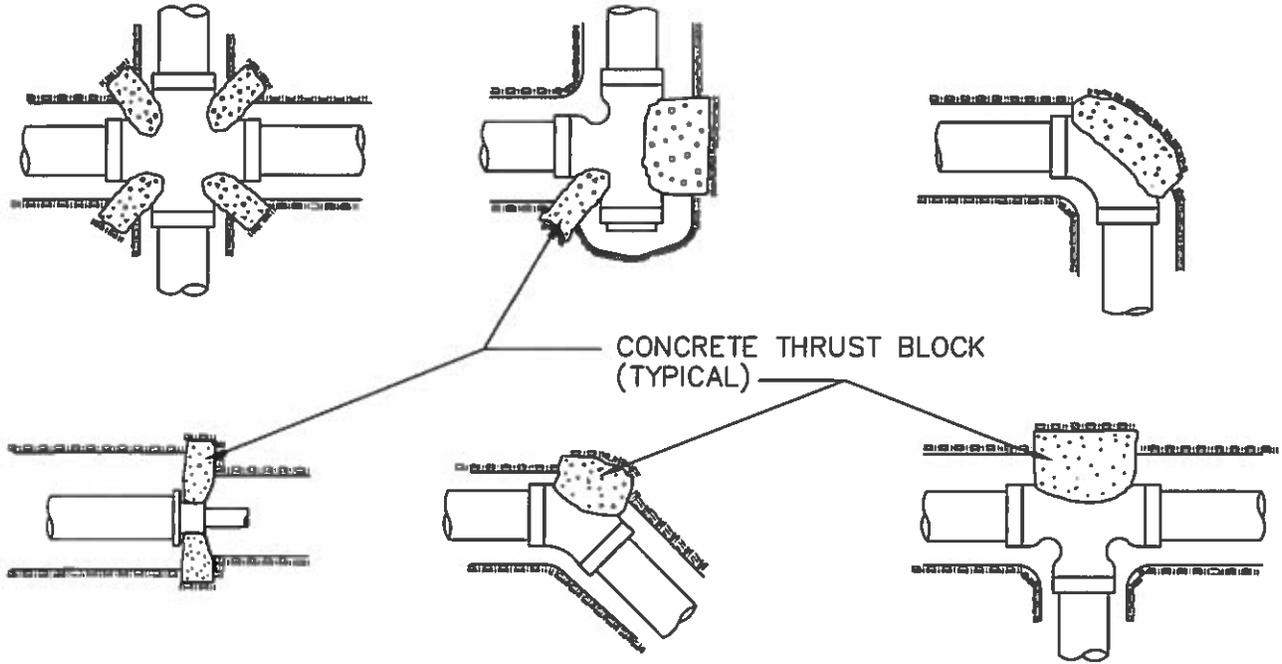
- A. SLEEVE BELOW HARDSCAPE ELEMENTS WITH CLASS 200 PVC PIPE, TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE WITHIN.
- B. FOR PIPE AND WIRE BURIAL DEPTHS REFER TO IRRIGATION LEGEND AND SPECIFICATIONS.
- C. TIE A 24" LOOP IN ALL WIRING AT CHANGES OF DIRECTION OF 30 DEGREES OR GREATER. UNTIE AFTER ALL CONNECTIONS BEEN MADE.



TRENCH DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>David R. Bristow</i>	No. Date App. Description	Drawing
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NOTE: EXCAVATE SIDES OF TRENCH TO PROVIDE SOLID SOIL FORM FOR CONCRETE THRUST BLOCK (TYPICAL).



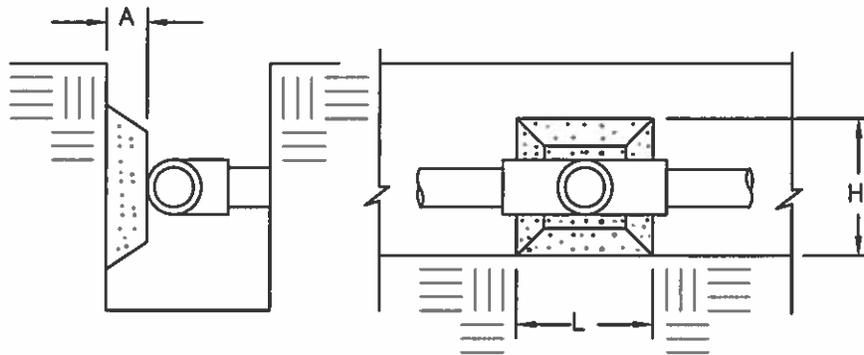
INSTALL MAIN LINE AS PER MANUFACTURER'S INSTALLATION GUIDE. SIZE OF CONCRETE THRUST BLOCKS SHALL BE PER PIPE MANUFACTURER'S INSTALLATION GUIDE.

- NOTES: A. CONCRETE SHALL BE KEPT BEHIND BELL OF THE FITTING WITH THE CONCRETE NOT PERMITTED TO RUN OVER/AGAINST THE PIPE OR INTO THE JOINT.
 B. ALL DUCTILE IRON & STEEL FITTINGS SHALL BE ENCASED WITH APPROVED POLYETHYLENE WRAP.

TYPICAL THRUST BLOCK DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault <i>JG</i>	Revisions	NTS
Approved by: <i>Brian R. Bowler</i>	No. Date App. Description	Drawing
CITY ENGINEER		I-12
Date: 3/16/16		



NOTES:

1. DISTANCE "A" TO BE 18" MINIMUM FROM FITTING TO UNDISTURBED SOIL. THRUST BLOCKS SHALL BE POURED ONLY AGAINST UNDISTURBED SOIL.
2. REFER TO THRUST BLOCK CHART BELOW FOR DISTANCE "L" AND "H".
3. CONCRETE TO BE SHAPED INTO A WEDGE WITH THE WIDE END AGAINST UNDISTURBED SOIL.
4. THRUST BLOCKING APPLIES TO GASKETED PIPE ONLY.
5. CONCRETE SHALL BE MIXED AND POURED IN ACCORDANCE WITH PIPE MANUFACTURER'S RECOMMENDED STANDARDS AND SPECIFICATIONS FOR THRUST BLOCKS.
6. CONCRETE SHALL BE KEPT BEHIND THE BELL OF THE FITTING WITH THE CONCRETE NOT PERMITTED TO RUN OVER/AGAINST THE PIPE OR INTO THE JOINT.
7. ALL DUCTILE IRON & STEEL FITTINGS SHALL BE ENCASED WITH APPROVED POLYETHYLENE WRAP.

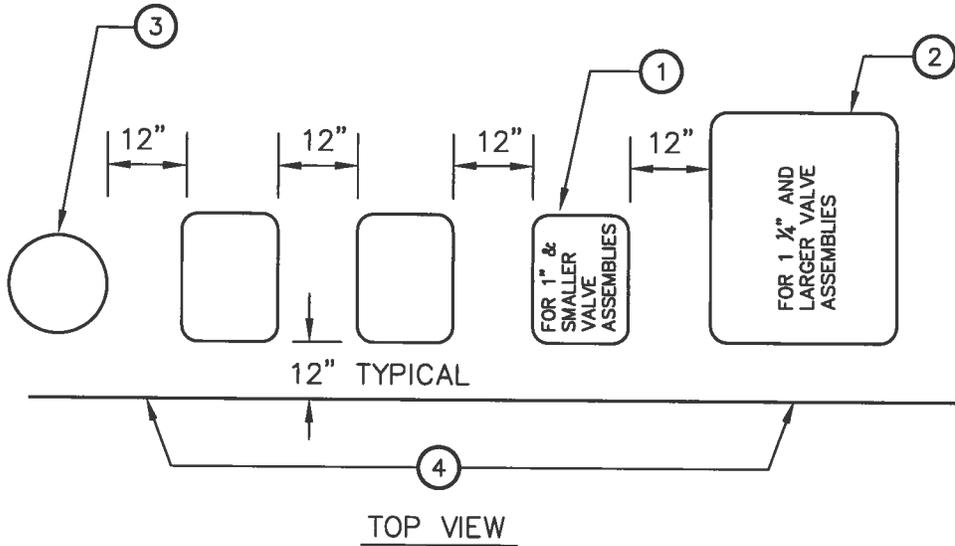
PIPE SIZE	90 BEND		45 BEND		BEARING AREA (SQUARE FT.)	L x H
	BEARING AREA (SQUARE FT.)	L x H	BEARING AREA (SQUARE FT.)	L x H		
3"	1.0	13"x13"	.57	10"x10"	.74	11"x11"
4"	1.7	16"x16"	.93	12"x12"	1.2	14"x14"
6"	3.7	23"x23"	2.0	17"x17"	2.6	20"x20"
8"	6.6	30"x30"	3.5	23"x23"	4.6	26"x26"

THE FIGURES IN THE CHART ARE BASED ON A WORKING PRESSURE OF 150 PSI.



THRUST BLOCK INFORMATION DETAIL

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Checked by: Jeff Gault #1	Revisions	NTS
Approved by: <i>Brian R. Bartlett</i>	No. Date App. Description	Drawing
CITY ENGINEER		I-13
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- ① 11-3/4" X 17" X 12" DEEP VALVE BOX.
- ② 16" X 25-1/2" X 15" DEEP RECTANGULAR VALVE BOX FOR 1-1/4" AND LARGER VALVE ASSEMBLIES.
- ③ 10" DIAMETER ROUND PLASTIC VALVE BOX FOR QUICK COUPLING VALVE, OR ISOLATION BALL VALVE
- ④ EDGE OF LAWN, PAVING, FENCE, CURB, ETC.

NOTES:

- A. ALIGN VALVE BOX OVER ASSEMBLY TO FACILITATE SERVICING COMPONENTS. ALL COMPONENTS WITHIN VALVE BOXES SHALL BE COMPLETELY ACCESSIBLE FOR SERVICE AND MAINTENANCE (TYPICAL).
- B. SET BOXES 1-1/2" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND 1" ABOVE FINISH GRADE IN TURF AREA.
- C. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA WHERE POSSIBLE. INSTALL IN LAWN ONLY IF GROUND COVER DOES NOT EXIST ADJACENT TO LAWN.
- D. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
- E. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES. COVER BOX CUT-OUTS TO PREVENT SOIL IN BOX.
- F. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.
- G. HOT STAMP ALL VALVE BOX LIDS WITH 2" MINIMUM LETTER HEIGHT PER LANDSCAPE STANDARD SPECIFICATIONS.
- H. USE PURPLE VALVE BOXES FOR RECYCLED SYSTEMS.

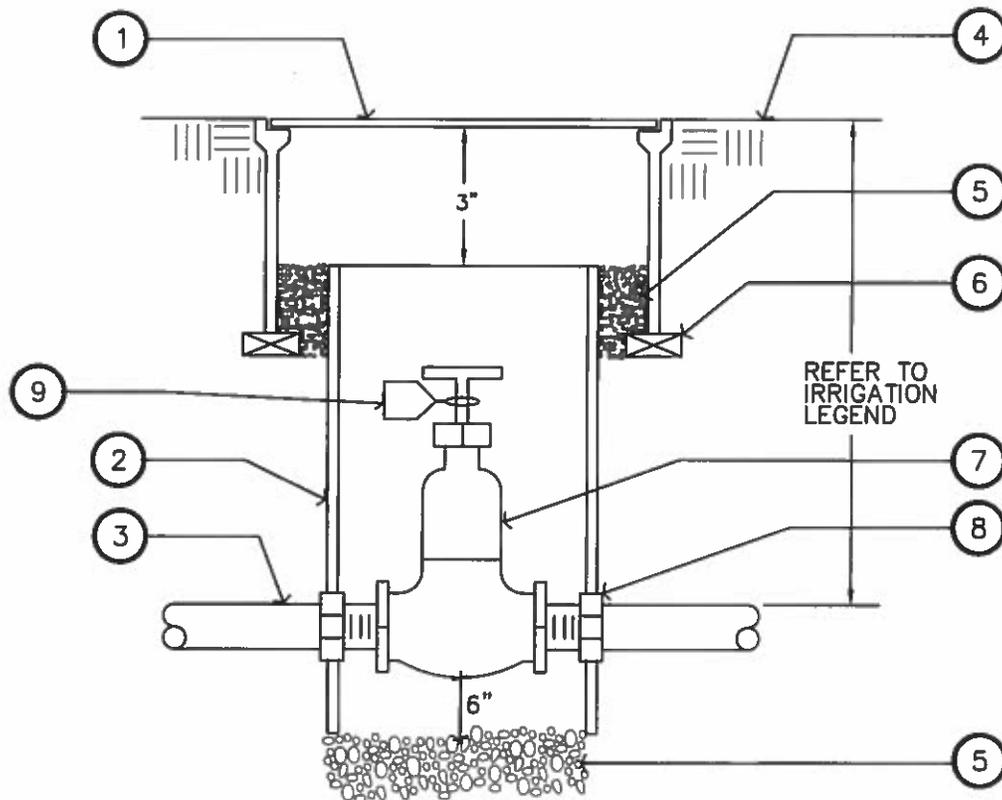
VALVE BOX DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault *JG*
 Approved by: *Ben R. Brunstein*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale: NTS	
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No.	Date	App.	Description

Drawing
1-14



- ① ROUND PLASTIC VALVE BOX WITH T-COVER LOCKING LID. TOP 10" DIAMETER. INSTALL AS SHOWN IN VALVE BOX DETAIL.
- ② 8" CLASS 160 OR SCHEDULE 40 PVC PIPE (NOTCH TO FIT OVER MAIN LINE PIPE).
- ③ PVC MAIN LINE.
- ④ FINISH GRADE.
- ⑤ 3/4" DRAIN ROCK - 6" DEEP MINIMUM.
- ⑥ BRICK: ONE ON EACH SIDE - 2 TOTAL.
- ⑦ GATE VALVE AS SPECIFIED.
- ⑧ SCHEDULE 80 PVC MALE ADAPTER.
- ⑨ PROVIDE RECYCLED WATER TAG WITHIN BOX - FOR RECYCLED SYSTEMS.

2.5" AND SMALLER GATE VALVE DETAIL

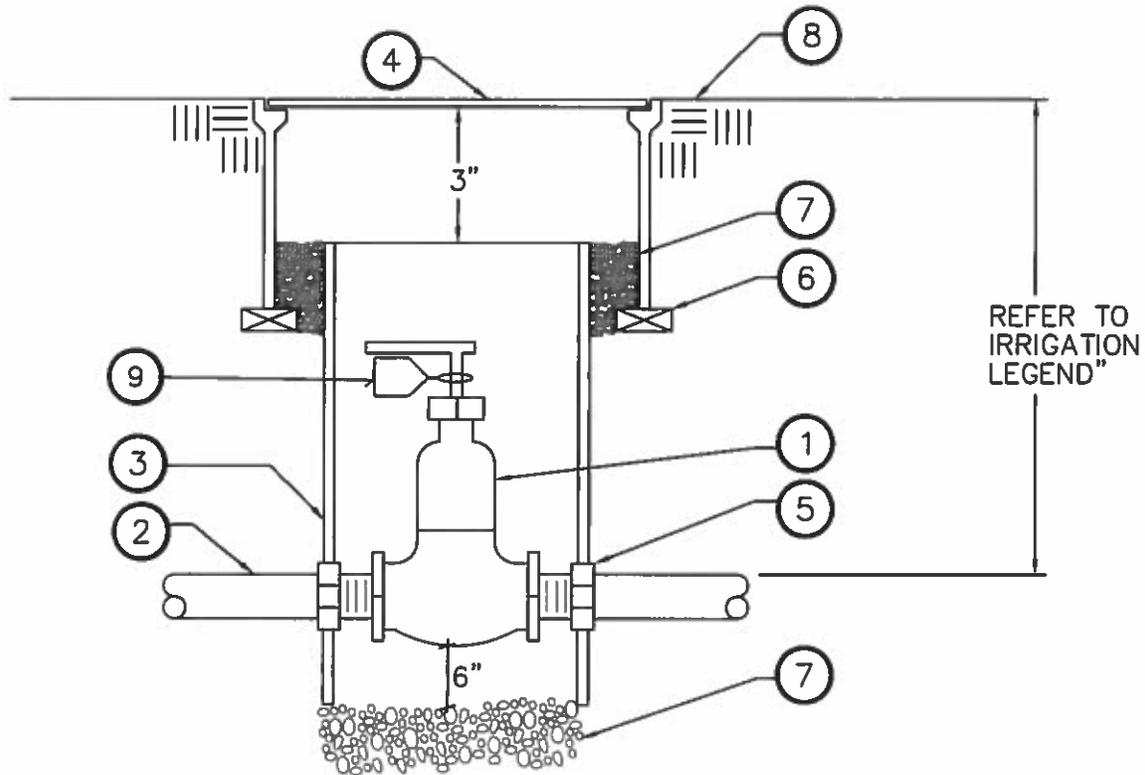


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 Checked by: Jeff Gault *JG*
 Approved by: *Kevin D. Bantle*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale: NTS	
Revisions			
No.	Date	App.	Description

Scale: NTS
 Drawing I-16

NOTE: ISOLATION VALVES FOR 1-1/2" AND SMALLER VALVE ASSEMBLIES



- ① ISOLATION VALVE (1-1/2" AND SMALLER) AS SPECIFIED.
- ② PVC MAIN LINE.
- ③ 8" CLASS 160 PVC PIPE. NOTCH TO FIT OVER MAINLINE PIPE AND POSITION TO ALLOW FULL OPERATION OF BALL VALVE CONTROL HANDLE.
- ④ ROUND PLASTIC VALVE BOX WITH T-COVER LOCKING LID. TOP DIMENSION: 10".
- ⑤ SCHEDULE 80 PVC MALE ADAPTER.
- ⑥ BRICK: ONE ON EACH SIDE - 2 TOTAL.
- ⑦ 3/4" DRAIN ROCK - 6" DEEP MINIMUM.
- ⑧ FINISH GRADE.
- ⑨ RECYCLED WATER TAG WITHIN BOX-FOR RECYCLED SYSTEMS.

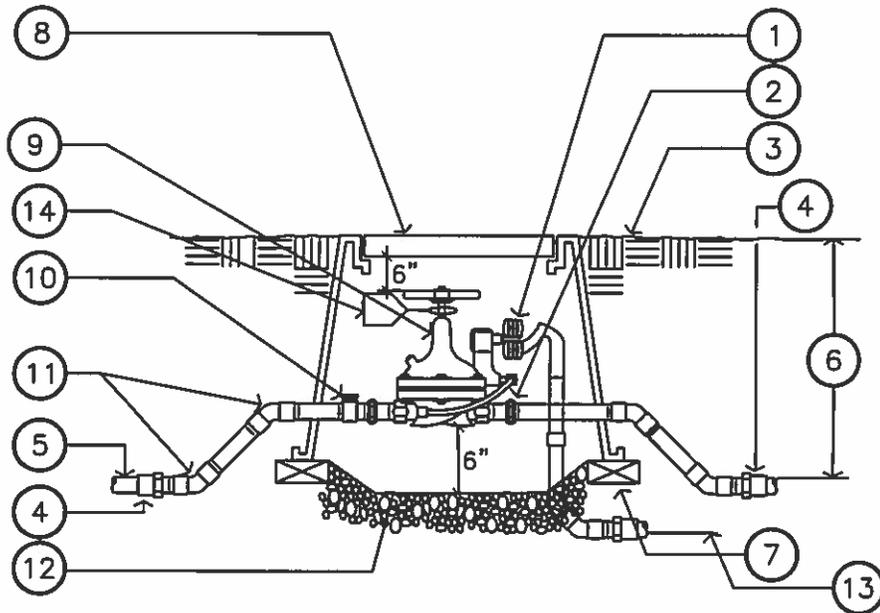
ISOLATION BALL VALVE DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Tom R. Boudreau*
 CITY ENGINEER
 Date: 2/14/16

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Revisions			
No.	Date	App.	Description

Drawing I-17

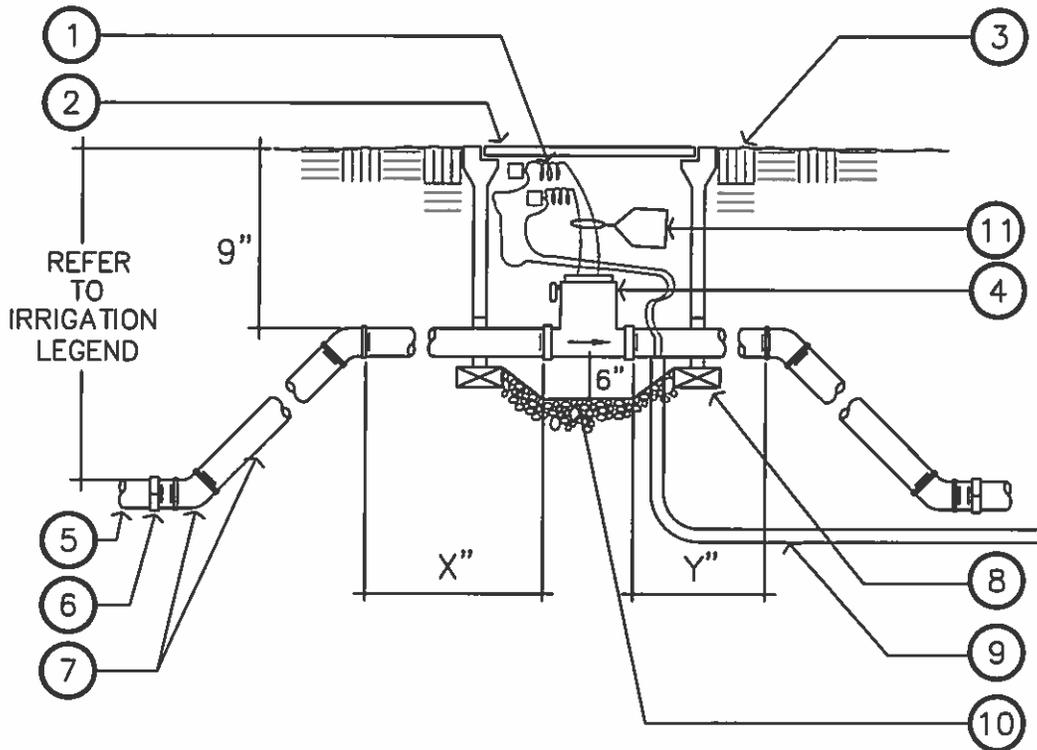


- ① VALVE CONTROL WIRE - PROVIDE DBRY-6 SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL
- ② SCHEDULE 80 PVC THREADED UNION (2 TOTAL)
- ③ FINISH GRADE
- ④ SCHEDULE 40 PVC MALE ADAPTER (2 TOTAL)
- ⑤ PVC MAIN LINE
- ⑥ REFER TO IRRIGATION LEGEND
- ⑦ BRICK - 1 EACH CORNER OF VALVE BOX
- ⑧ RECTANGULAR PLASTIC VALVE BOX WITH T-COVER LOCKING LID. ONE VALVE PER BOX - NO EXCEPTIONS. INSTALL BOX AS SHOWN IN VALVE BOX DETAIL. TOP DIMENSION AS FOLLOWS:
 - A. FOR 1" AND SMALLER MASTER CONTROL VALVES, INSTALL A VALVE BOX WITH AN OUTSIDE TOP DIMENSION OF 11-3/4" X 17" X 12" DEEP.
 - B. FOR 1-1/4" AND LARGER MASTER CONTROL VALVES INSTALL A VALVE BOX WITH A MINIMUM OUTSIDE TOP DIMENSION OF 16" X 25-1/2" X 15" DEEP.
- ⑨ MASTER CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED.
- ⑩ THREADED BRONZE BALL VALVE IN 1-1/2" AND SMALLER ASSEMBLIES, THREADED BRONZE GATE VALVE IN 2" AND LARGER ASSEMBLIES
- ⑪ SCHEDULE 80 PVC NIPPLES (TBE) AND 45° THREADED ELBOWS (TYPICAL FOR BOTH SIDES OF VALVE)
- ⑫ 3/4" DRAIN ROCK - 4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX). INSTALL WELDED WIRE MESH BELOW VALVE BOX IN ACCORDANCE WITH CALTRANS STANDARDS.
- ⑬ CONDUIT FROM CONTROLLER TO VALVE BOX IS TO BE INSTALLED IN A 1-1/2" SCHEDULE 80 PVC CONDUIT WITH PULL BOXES AT 200' OR LESS.
- ⑭ RECYCLED WATER TAG WITHIN BOX-FOR RECYCLED SYSTEMS.



MASTER CONTROL VALVE DETAIL

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Approved by: <i>Brian R. Bortolin</i>	No. Date App. Description	Drawing
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- ① SENSOR CONTROL WIRE: PROVIDE SPEARS DS 100 CONNECTORS AT ALL SPLICES AND 36" OF EXCESS U.F. WIRE IN A 1" DIAMETER COIL.
- ② RECTANGULAR PLASTIC VALVE BOX WITH T-COVER LOCKING LID: TOP DIMENSION 11-3/4" X 17" (12" DEEP).
- ③ FINISH GRADE.
- ④ CALSENSE MODEL FM FLOW SENSOR - WIRE TO CONTROLLER AS DIRECTED BY MANUFACTURER'S REPRESENTATIVE (SIZE AS SPECIFIED).
- ⑤ PVC MAINLINE.
- ⑥ UPC APPROVED SCHEDULE 80 PVC MALE ADAPTER (2 TOTAL).
- ⑦ SCHEDULE 80 PVC THREADED NIPPLES AND 45 DEGREE ELBOWS (AS REQUIRED ON BOTH SIDES OF SENSOR).
- ⑧ BRICK - 1 EACH CORNER OF VALVE BOX.
- ⑨ SENSOR WIRE FROM CONTROLLER TO VALVE BOX IS TO BE INSTALLED IN A 1-1/2" SCHEDULE 80 PVC CONDUIT WITH PULL BOXES AT 200' OR LESS
- ⑩ 3/4" DRAIN ROCK - 4" DEEP BELOW SENSOR (NO SOIL IN VALVE BOX). INSTALL WELDED WIRE MESH BELOW VALVE BOX IN ACCORDANCE WITH CALTRANS STANDARDS.
- ⑪ RECYCLED WATER TAG WITHON BOX - FOR RECYCLED SYSTEMS.

NOTE: THE CONTRACTOR SHALL INSTALL FLOW SENSOR TO ALLOW STRAIGHT-FLOW OF A MINIMUM OF TEN TIMES THE DIAMETER OF MAINLINE PIPE ON THE INLET (X) SIDE AND FIVE TIMES THE DIAMETER OF MAINLINE PIPE ON THE OUTLET (Y) SIDE OF THE SENSOR. REFER TO CALSENSE INSTALLATION RECOMMENDATIONS.

FLOW SENSOR DETAIL



Drawn by: SP/ER

Date: March 2016

Scale:

Checked by: Jeff Gault *JG*

Revisions

NTS

Approved by:

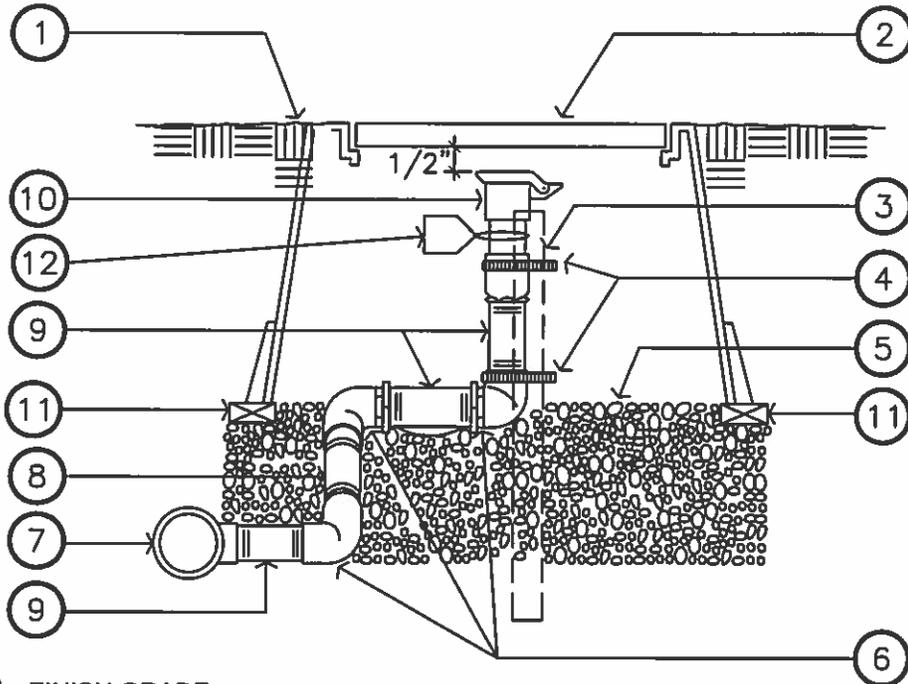
No.	Date	App.	Description

Drawing

Kevin R. Brunstein
CITY ENGINEER

I-19

Date: 3/14/16



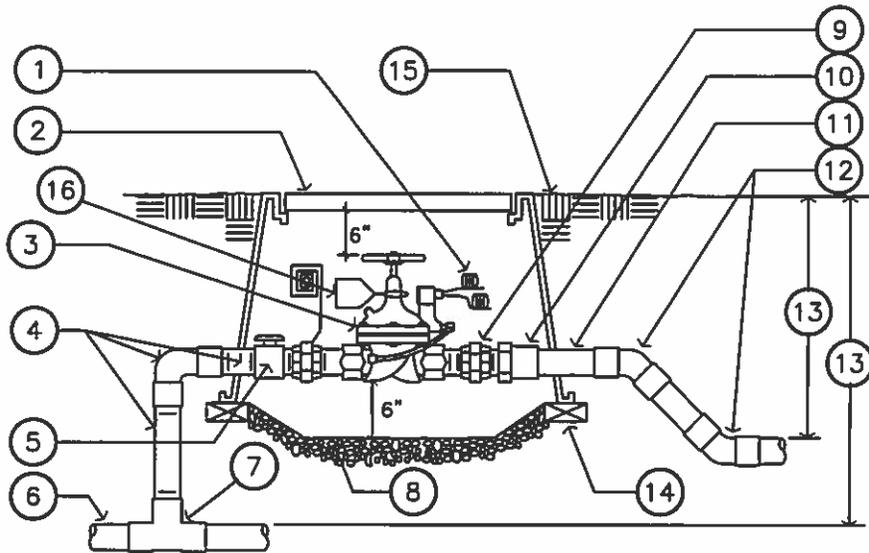
- ① FINISH GRADE.
- ② 10" DIAMETER ROUND PLASTIC VALVE BOX WITH T-COVER LOCKING LID. USE 6" ROUND BOX IN BASEBALL INFIELDS ONLY.
- ③ 1" X 3/16" X 30" ANGLE IRON.
- ④ PLASTIC ZIP TIES.
- ⑤ 3/4" DRAIN ROCK - 12" MIN. DEPTH.
- ⑥ PVC SCHEDULE 80 - 90 DEGREE ELL (T X T) - 3 TOTAL.
- ⑦ PVC SCHEDULE 80 TEE (S X S X T) OR 90 DEGREE ELL (S X T) CONNECTED TO IRRIGATION MAIN LINE.
- ⑧ PVC SCHEDULE 80 - 12" MIN LENGTH NIPPLE. SIZE AS REQUIRED.
- ⑨ PVC SCHEDULE 80 - 3" NIPPLE.
- ⑩ 1" QUICK COUPLING VALVE. LOCATE AT END OF VALVE MANIFOLDS OR END OF LINE.
- ⑪ BRICK (2 TOTAL).
- ⑫ PROVIDE RECYCLED WATER TAG WITHIN BOX - FOR RECYCLED SYSTEMS

NOTES: A. SET TOP OF BOX 1" ABOVE FINISH GRADE IN SHRUB AREAS ONLY.
 B. INSTALL ISOLATION BALL VALVE ASSEMBLY UPSTREAM FROM QUICK COUPLING VALVES AT BASEBALL INFIELDS ONLY (OUTSIDE OF PLAYFIELD AREA).



QUICK COUPLING VALVE DETAIL

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Approved by: <i>Brian R. Bountin</i>	No. Date App. Description	Drawing 1-20
CITY ENGINEER		
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- ① VALVE CONTROL WIRE - PROVIDE 3M DBR/Y-6 SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIAMETER COIL. ATTACH VALVE I.D. TAGS PER SPECIFICATIONS.
- ② RECTANGULAR PLASTIC VALVE BOX WITH T-COVER LOCKING LID. ONE VALVE PER BOX - NO EXCEPTIONS. INSTALL BOX AS SHOWN IN VALVE BOX DETAIL. TOP DIMENSION AS FOLLOWS:
 - A. FOR 1" AND SMALLER CONTROL VALVES INSTALL A VALVE BOX WITH AN OUTSIDE TOP DIMENSION OF 11-3/4" X 17" X 12" DEEP.
 - B. FOR 1-1/4" AND LARGER CONTROL VALVES INSTALL A VALVE BOX WITH A MINIMUM OUTSIDE TOP DIMENSION OF 16" X 25-1/2" X 15" DEEP.
- ③ REMOTE CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED.
- ④ SCHEDULE 80 PVC THREADED FITTINGS (AS REQUIRED).
- ⑤ THREADED PVC BALL VALVE IN 1-1/2" AND SMALLER ASSEMBLIES, THREADED BRONZE GATE VALVE IN 2" AND LARGER ASSEMBLIES (SEE NOTE BELOW).
- ⑥ PVC MAIN LINE.
- ⑦ SCHEDULE 80 PVC MAINLINE TEE CONNECTION.
- ⑧ 3/4" DRAIN ROCK - 4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX). INSTALL WELDED WIRE MESH BELOW VALVE BOX IN ACCORDANCE WITH CALTRANS STANDARDS.
- ⑨ SCHEDULE 80 PVC THREADED UNION (2 TOTAL).
- ⑩ SCHEDULE 80 PVC MALE ADAPTER.
- ⑪ PVC LATERAL LINE.
- ⑫ LOWER LATERAL LINE WITH SCHEDULE 80 PVC 45° ELBOWS.
- ⑬ REFER TO IRRIGATION LEGEND FOR PIPE DEPTHS.
- ⑭ BRICK - 1 EACH CORNER OF VALVE BOX.
- ⑮ FINISH GRADE.
- ⑯ PROVIDE RECYCLED WATER TAG WITHIN BOX - FOR RECYCLED SYSTEMS.

NOTE: INSTALL ONE ISOLATION VALVE FOR EACH ISOLATED RCV, OR ONE ISOLATION VALVE FOR A GROUP OF RCV'S (SIZE TO MATCH LARGEST RCV).



REMOTE CONTROL VALVE DETAIL

Drawn by: SP/ER

Date: March 2016

Scale:

Checked by: Jeff Gault

Revisions

NTS

Approved by:

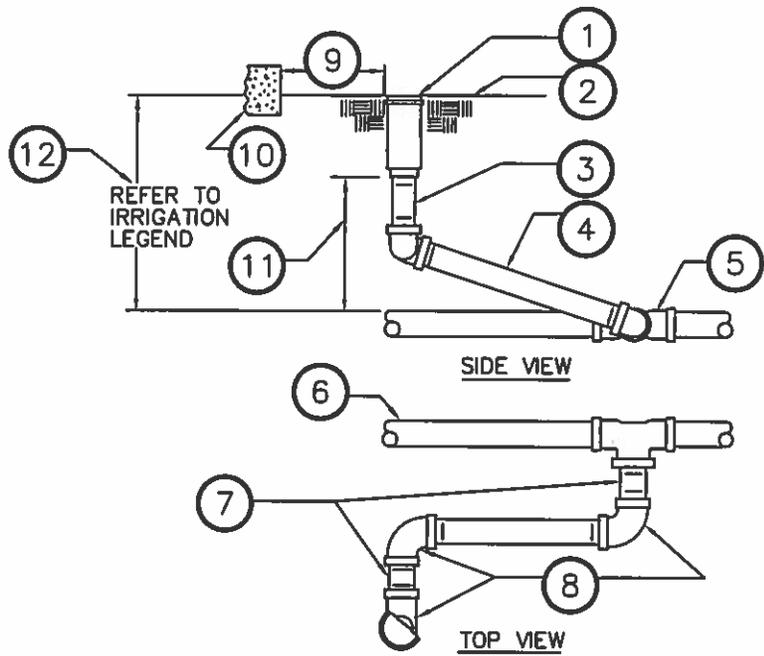
No. Date App. Description

Drawing

Brian R. Boudreau
CITY ENGINEER

Date: 3/18/16

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- ① POP-UP SPRINKLER AS SPECIFIED.
- ② FINISH GRADE.
- ③ SCHEDULE 80 PVC THREADED NIPPLE (LENGTH AS REQUIRED).
- ④ 10" LONG SCHEDULE 80 PVC THREADED NIPPLE.
- ⑤ SCHEDULE 40 PVC TEE OR ELBOW.
- ⑥ PVC LATERAL LINE.
- ⑦ 3" LONG SCHEDULE 80 PVC THREADED NIPPLE FOR 3/4" AND LARGER ASSEMBLIES.
- ⑧ SCHEDULE 80 PVC THREADED 90° ELBOWS FOR 3/4" AND LARGER ASSEMBLIES, MARLEX STREET ELLS FOR 1/2" ASSEMBLIES.
- ⑨ 2" IN TURF AREAS, 4"-6" IN GROUND COVER AREAS, 6" IN STREET MEDIANS.
- ⑩ WALL, WALK, CURB OR HEADER.
- ⑪ 6" BELOW BOTTOM OF SPRINKLER BODY.
- ⑫ 12" MINIMUM DEPTH.

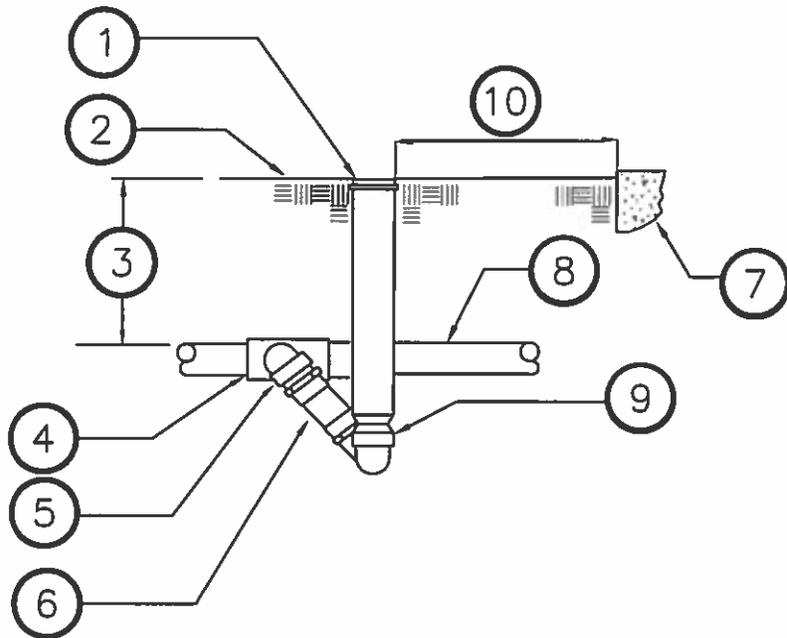
NOTES:

- A. SET SPRINKLER 2" ABOVE FINISH GRADE IN SHRUB AREAS AND 1" ABOVE FINISH GRADE IN TURF AREAS.
- B. NIPPLES AND FITTINGS TO BE SAME IPT SIZE AS SPRINKLER IPT INLET THREAD SIZE.
- C. PRE-ASSEMBLED SWING JOINTS BY LESCO OR OTHERS ARE NOT PERMITTED FOR USE ON ANY CITY IRRIGATION SYSTEM.

POP-UP SPRINKLER RISER DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
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Approved by: <i>Tom R. Boucher</i>	No. Date App. Description	Drawing
CITY ENGINEER		1-22
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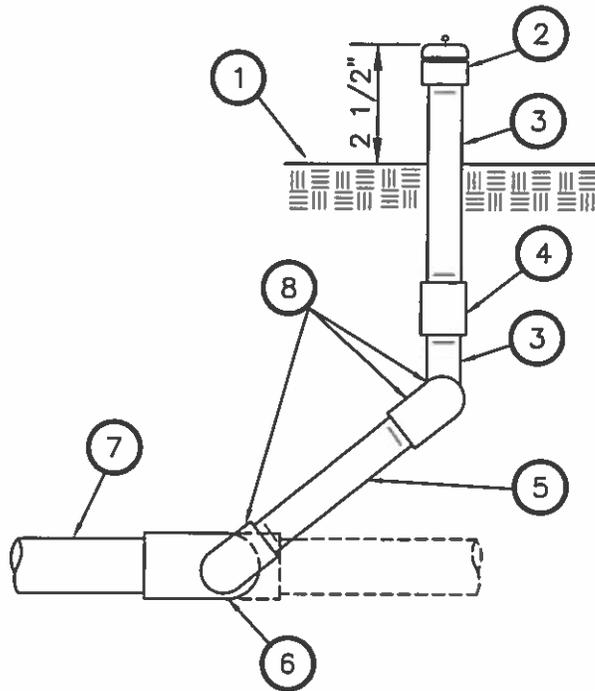
- ① ROTOR SPRINKLER AS SPECIFIED
- ② FINISH GRADE
- ③ REFER TO IRRIGATION LEGEND
- ④ SCHEDULE 40 PVC TEE OR ELBOW
- ⑤ 3/4" OR 1" SCHEDULE 40 PVC STREET ELL
- ⑥ 3/4" OR 1" SCHEDULE 80 PVC THREADED NIPPLE (LENGTH AS REQUIRED)
- ⑦ WALL, WALK, CURB OR BUILDING
- ⑧ PVC LATERAL LINE
- ⑨ MARLEX 90 DEGREE STREET ELL (2 TOTAL)
- ⑩ 2" IN TURF AREAS, 4'-6" IN GROUNDCOVER AREAS, 6" IN STREET MEDIAN

NOTE: SET ROTOR 2" ABOVE FINISH GRADE IN SHRUB AREAS AND 1" ABOVE FINISH GRADE IN TURF AREAS



SPRINKLER ROTOR FOR 3/4" OR 1" INLET DETAIL

Drawn by: SP/ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	
Approved by: <i>David R. Brantner</i>	No.	Date
CITY ENGINEER	App.	Description
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		Drawing 1-23



- ① FINISH GRADE
- ② BUBBLER (SEE LEGEND)
- ③ PVC SCHEDULE 80 NIPPLE (LENGTH AS REQUIRED)
- ④ PVC SCHEDULE 40 COUPLING (TXT) OR SPRING LOADED CHECK VALVE (KBI CV SERIES) AS REQUIRED FOR LOW OUTLET DRAINAGE PREVENTION
- ⑤ PVC SCHEDULE 80 NIPPLE (LENGTH AS REQUIRED)
- ⑥ PVC SCHEDULE 40-90 DEGREE ELL (S X T) OR TEE (S X S X T)
- ⑦ PVC LATERAL LINE
- ⑧ MARLEX STREET ELLS (3 TOTAL)

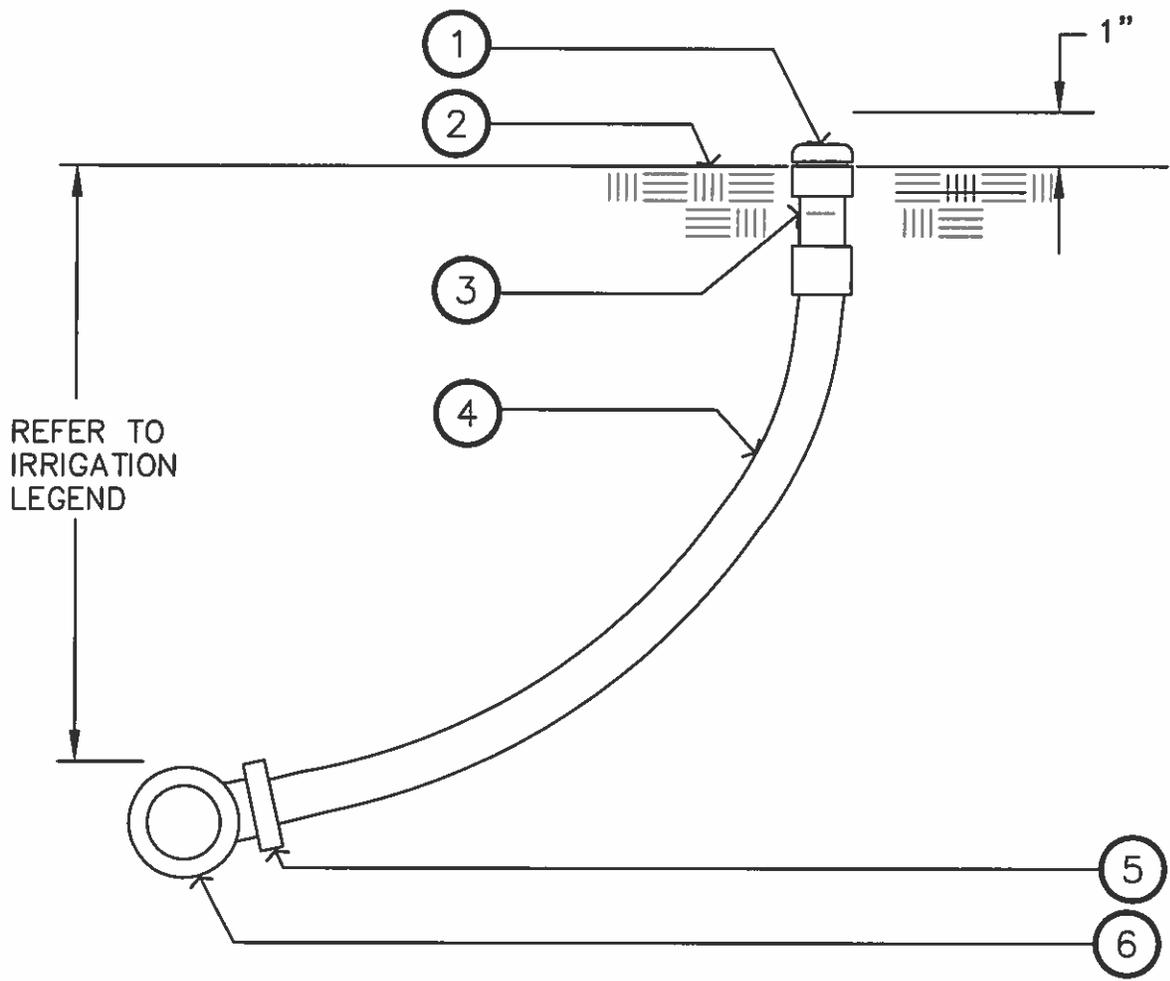
NOTES: A. INSTALL ONE BUBBLER PER PLANTING WITHIN TREE BASIN ON EDGE OF ROOTBALL AT A MAXIMUM OF 12" FROM TRUNK OF TREE AND 6" FROM TRUNK OF SHRUB. LOCATE ON UPHILL SIDE OF PLANT.

B. THIS DETAIL APPLIES TO STREET PROJECTS, SHRUB AND GROUND COVER AREAS ONLY.

SHRUB & TREE BUBBLER RISER DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Ben R. Bountin</i> CITY ENGINEER	No. Date App. Description	Drawing
Date: 3/18/16		1-24



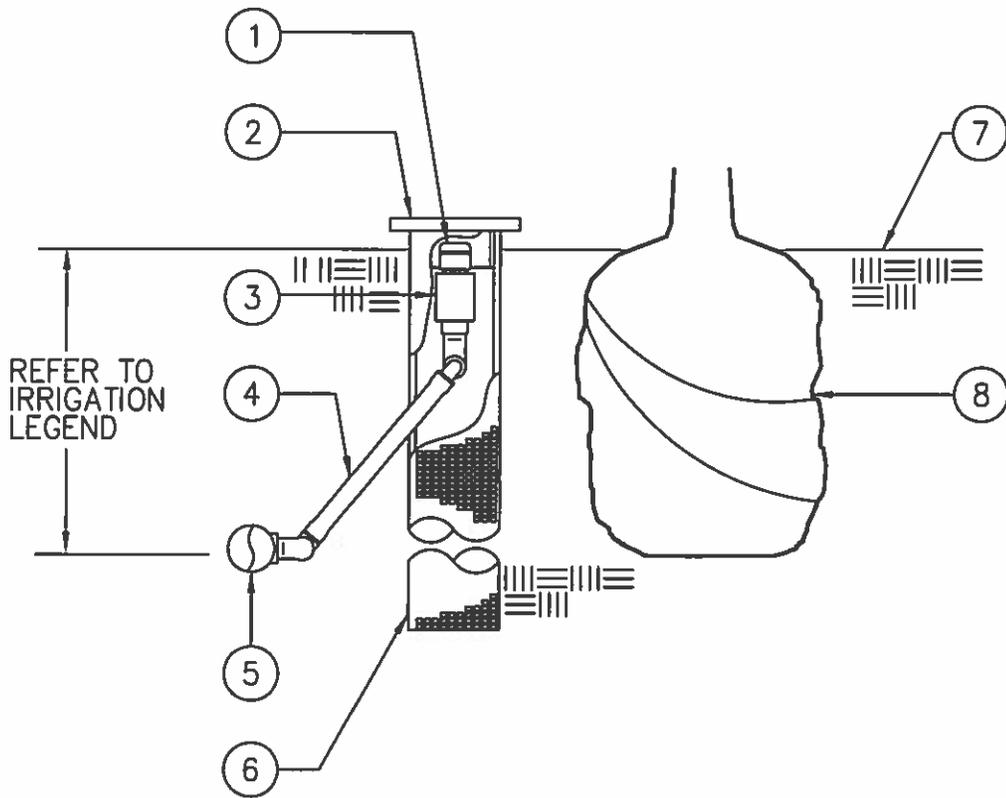
- ① BUBBLER (SEE LEGEND).
- ② FINISH GRADE.
- ③ 1/2" SCHEDULE 40 (WHITE) PVC MALE ADAPTER. INSTALL SPRING-LOADED CHECK VALVE BETWEEN MALE ADAPTER AND BUBBLER NOZZLE WHERE NECESSARY TO CONTROL LOW OUTLET DRAINAGE.
- ④ 1/2" IPS FLEXIBLE HOSE (PVC) (.840 O.D.) USE ONLY IPS WELD-ON #795 SOLVENT CEMENT WITH P-70 PRIMER ON THIS HOSE.
- ⑤ PVC TEE OR ELBOW.
- ⑥ PVC LATERAL LINE.

NOTES: A. INSTALL ONE BUBBLER WITHIN PLANTING BASIN ON EDGE OF ROOT-BALL AT A MAXIMUM OF 12" FROM TRUNK OF TREE AND 6" FROM TRUNK OF SHRUB. STAKE BUBBLER TO GRADE WITH 8" WIRE STAPLE.
 B. THIS DETAIL DOES NOT APPLY TO TREE BUBBLERS IN TURF AREAS.



SHRUB & TREE BUBBLER DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Ben R. Borstler</i>	No. Date App. Description	Drawing
Date: 3/14/16		1-25



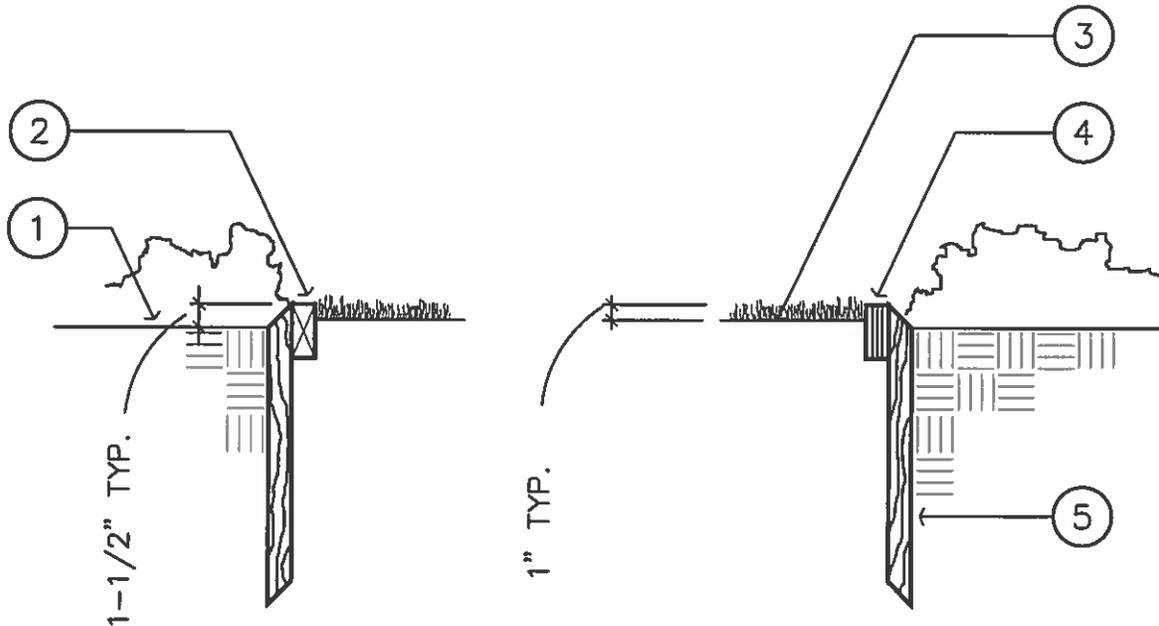
- ① BUBBLER AS SPECIFIED
- ② GRATE – SET 2" ABOVE FINISH GRADE IN SHRUB AREAS AND 1" ABOVE FINISH GRADE IN TURF AREAS
- ③ CHECK VALVE
- ④ BUILT-IN SWING JOINT
- ⑤ PVC LATERAL LINE
- ⑥ HUNTER 3"x8" ROOT ZONE WATERING SYSTEM WITH FILTER FABRIC SLEEVE OR APPROVED EQUAL
- ⑦ FINISH GRADE
- ⑧ TREE ROOTBALL

NOTE: INSTALL BUBBLER ON UPHILL SIDE OF ROOTBALL.



TREE BUBBLER DETAIL

Drawn by: SP/ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	Drawing 1-26
Approved by: <i>Brian P. Bourquin</i>	No. Date App. Description	
CITY ENGINEER		
Date: 3/14/16		

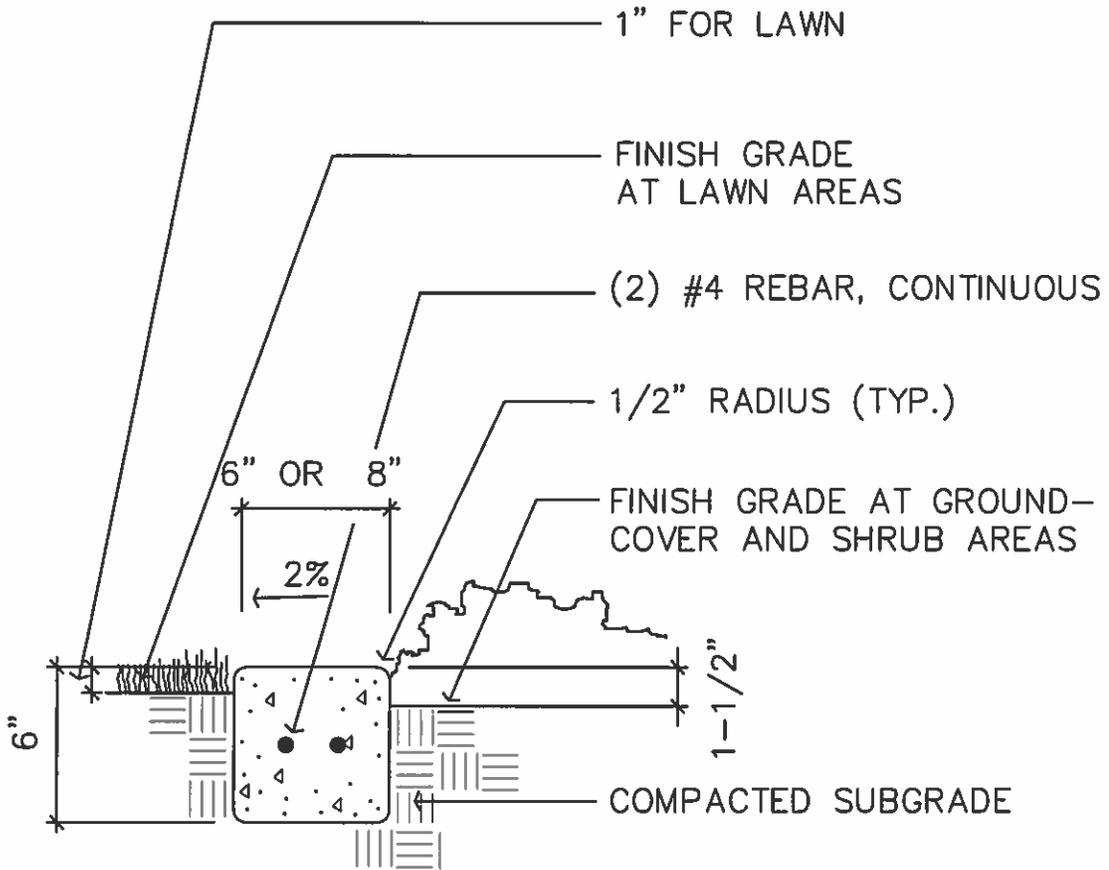


- ① FINISH GRADE AT GROUNDCOVER OR SHRUB AREA
- ② STRAIGHT RUNS: 2" x 6" P.T.D.F (BROWN) BOARD OR APPROVED EQUAL, NAILED TO STAKE
- ③ FINISH GRADE AT LAWN AREA
- ④ CURVED RUNS: LAMINATE 2-1"X4" OR 4-1/2"X4" REDWOOD AS REQUIRED LAP 2'-0" MINIMUM AT ALL JOINTS.
- ⑤ 2" x 4" x 18" REDWOOD STAKES CONSTRUCTION HEART ROUGH; 4'-0" O.C. AND ALL JOINTS, LAPS AND ENDS

WOOD HEADER DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Ben R. Bernstein</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-1
Date: 3/18/16		

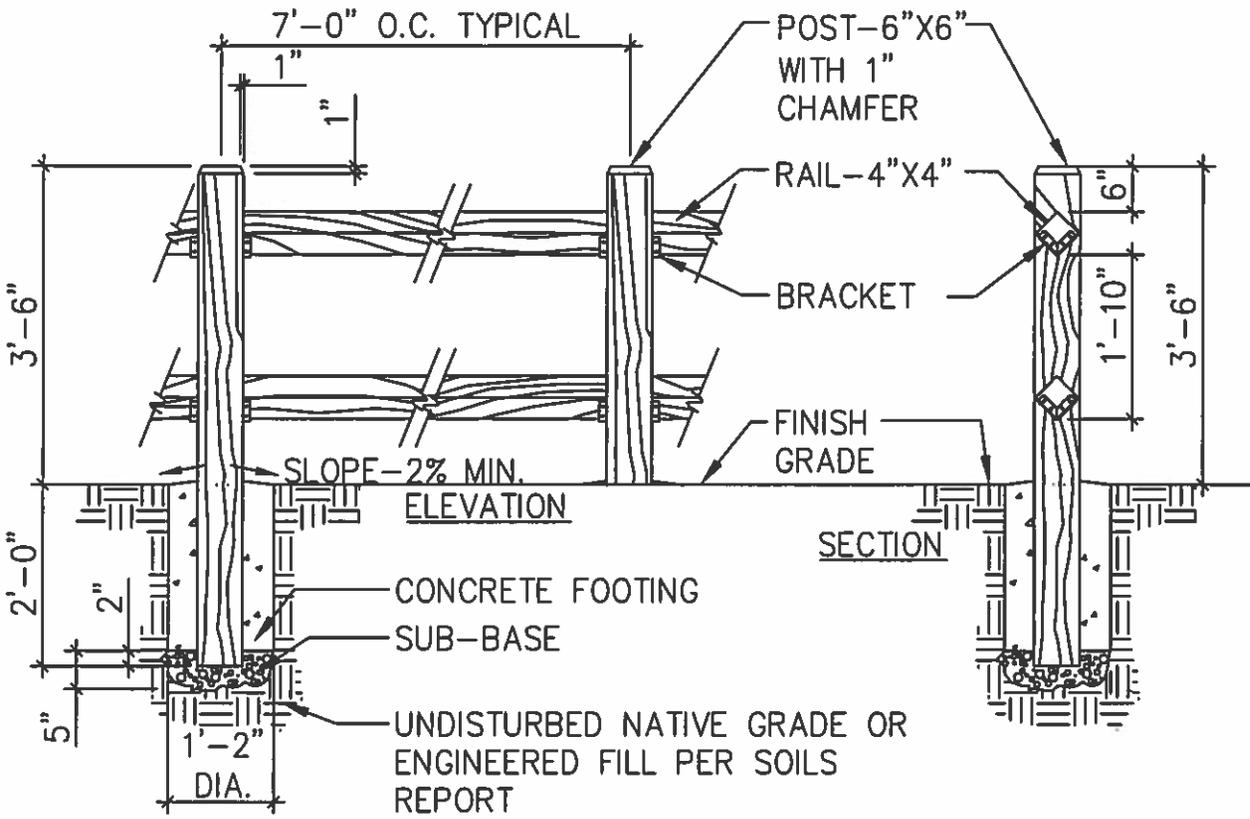


NOTE: PROVIDE DEEP SCORE JOINTS AT 10' O.C. & FIBROUS EXPANSION JOINTS AT 20' O.C. UNLESS OTHERWISE SPECIFIED OTHERWISE.

CONCRETE MOW STRIP DETAIL

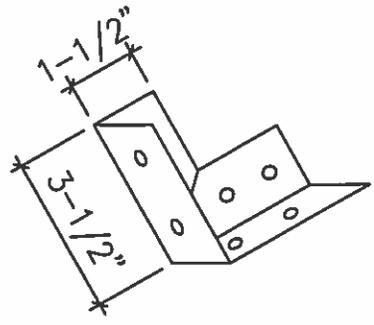


Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by:	No Date App Description	Drawing
<i>Kevin R. Bonville</i>		S-2
CITY ENGINEER		
Date: 3/14/16		



NOTES:

- A. ALL WOOD TO BE ROUGH SAWN REDWOOD. ALL POSTS SHALL BE PRESSURE TREATED.
- B. SLOPE RAILS WITH GRADE, DO NOT STEP.
- C. ATTACH BRACKETS WITH 10d COMMON, GALVANIZED NAILS.
- D. BRACKET SHALL BE 18 GAUGE GALVANIZED STEEL.

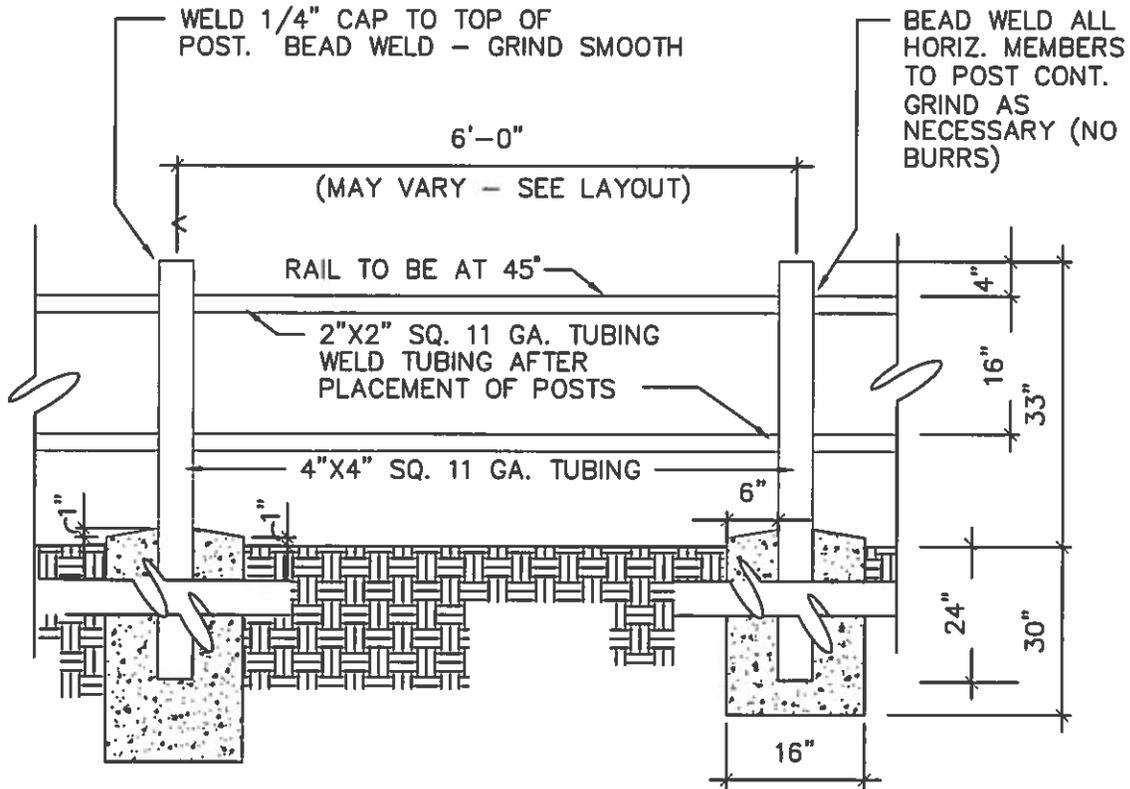


BRACKET ENLARGEMENT

WOOD RAIL FENCE DETAIL

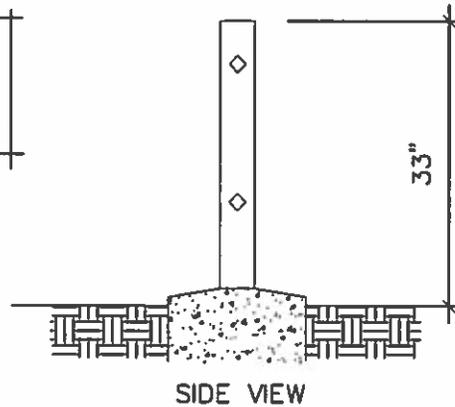


Drawn by: SP/ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	Drawing S-3
Approved by: <i>Dean R. Boardman</i>	No Date App Description	
CITY ENGINEER		
Date: 3/18/16		



FENCE TO BE PAINTED WITH RUST INHIBITING PAINT. ALL WELDING SHALL BE FIELD WELDED. ALL METAL BURRS & SHARP EDGES TO BE GROUND SMOOTH & CONTINUOUS. SEE DETAIL S-4A

* COLOR BROWN, SHERWIN WILLIAMS
SHER-CRYL HPA, ACRYLIC GLOSS OCC8629
UNLESS SPECIFIED OTHERWISE



METAL RAIL FENCE DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Caran R. Bortolin*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale: NTS	
Revisions			
No.	Date	App.	Description

Drawing S-4

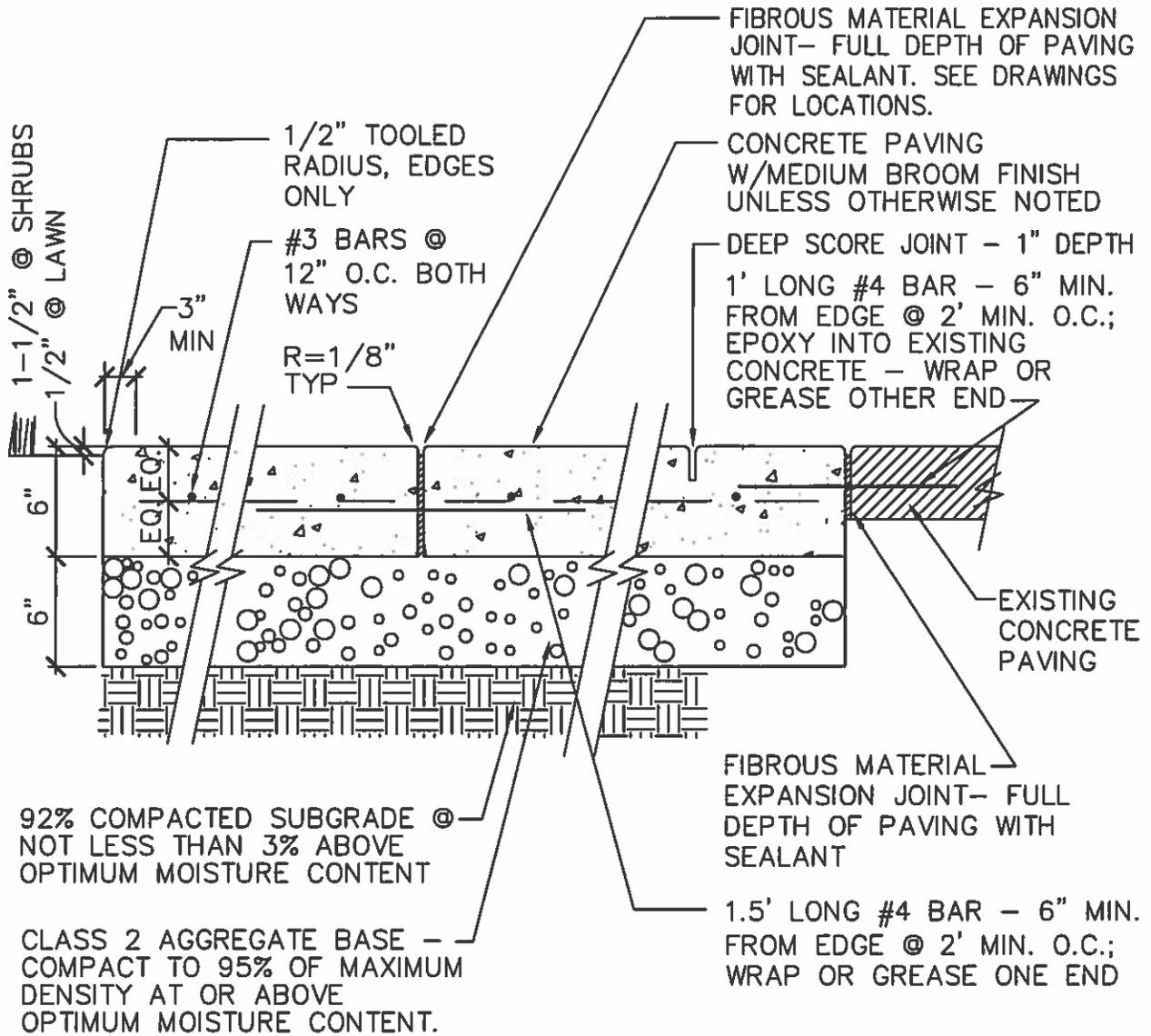
METAL PAINT NOTES:

1. WORK INCLUDES FACTORY PAINTING, FIELD PAINTING, AND FIELD TOUCH UP PAINTING. METAL TO BE PAINTED INCLUDES GAZEBO, METAL RAIL FENCE & METAL HANDRAIL.
2. SUBMITTALS: SUBMIT MANUFACTURER'S CATALOG INFORMATION FOR ALL PAINT PRODUCTS AND TWO 8"x10" SAMPLES OF EACH COLOR OF FINISH PAINT. SAMPLES SHALL BE RETAINED BY THE COUNTY REPRESENTATIVE TO COMPARE WITH FINISHES AS THEY ARE APPLIED.
3. MATERIALS:
 - A. USE ONLY MATERIALS RECOMMENDED BY FINISH PAINT MANUFACTURER. PRIMER & PAINT SHALL BE PART OF A UNIFIED SYSTEM OF PAINT FINISH.
 - B. PAINT SYSTEMS SPECIFIED ARE INTENDED TO ESTABLISH THE QUALITY OF PAINT PRODUCTS. EQUIVALENT PRODUCTS ARE ONLY ACCEPTABLE WITH CITY APPROVAL.
 - C. PAINT COLOR: SEE INDIVIDUAL DETAILS.
4. FACTORY OR POINT OF FABRICATION APPLIED PAINT SYSTEM:
 - A. SURFACE PREPARATION: ALL SCALE, RUST AND OTHER CONTAMINATES SHALL BE REMOVED AND ALL SURFACES CLEANED TO STEEL STRUCTURES PAINTING COUNCIL (SSPC) SP-6 COMMERCIAL BLAST CLEANING STANDARD. PRIOR TO PRIME AND TOP COAT APPLICATIONS, ALL SURFACES SHALL BE CLEAN, DRY AND FREE OF OIL, GREASE, FINGERPRINTS AND OTHER CONTAMINANTS. DO NOT USE HYDROCARBON SOLVENTS FOR CLEANING.
 - B. APPLICATION METHOD: AIRLESS, AIR, HVLP, OR AIR-ASSISTED AIRLESS SPRAY.
 - C. PRIME COAT: SHERWIN-WILLIAMS PRO-CRYL UNIVERSAL METAL PRIMER B66-310 SERIES UNLESS SPECIFIED OTHERWISE. INSTALL PER PRODUCT DATA SHEET #1.23.
 - D. APPLY BY SPRAY TO A DRY FILM THICKNESS OF 3.0 TO 4.0 MILS D.F.T.
 - E. TOP COAT: SHERWIN-WILLIAMS SHERCRYL HPA-HIGH PERFORMANCE ACRYLIC GLOSS B66-300 SERIES UNLESS SPECIFIED OTHERWISE. INSTALL PER PRODUCT DATA SHEET #1.26. APPLY TO A DRY FILM THICKNESS OF 5.0 TO 8.0 MILS. THIS WILL REQUIRE A MINIMUM OF TWO COATS TO REACH THE REQUIRED DFT.
 - F. TOTAL FILM THICKNESS OF PRIME & TOP COATS: 8.0 TO 12.0 MILS D.F.T.
5. FIELD APPLIED AND TOUCH UP PAINT SYSTEM:
 - A. SURFACE PREPARATION: AREAS TO BE TOUCHED UP SHALL BE SCARIFIED WITH A PALM SANDER, POLE SANDER OR SCOTCH BRITE PAD. ALL RUST SHALL BE REMOVED TO BRIGHT METAL. ALL OIL, GREASE, FINGERPRINTS AND OTHER CONTAMINANTS SHALL BE REMOVED WITH CLEAN SOLVENT AND CLEAN RAGS. DO NOT USE HYDROCARBON SOLVENTS FOR CLEANING.
 - B. APPLICATION METHOD: BRUSH, ROLLER, AIRLESS, AIR, HVLP, OR AIR-ASSISTED AIRLESS SPRAY.
 - C. FIELD WELDS: AREAS TO BE WIRE BRUSHED. APPLY SHERWIN-WILLIAMS ZINC-CLAD COLD GALVANIZING COMPOUND PRIOR TO APPLYING PRIME COAT. INSTALL PER PRODUCT DATA SHEET #11.02.
 - D. PRIME COAT: SHERWIN-WILLIAMS PRO-CRYL UNIVERSAL METAL PRIMER B66-310 SERIES. INSTALL PER PRODUCT DATA SHEET #1.23. APPLY TO A DRY THICKNESS OF 3.0 TO 4.0 MILS. THIS MAY REQUIRE MULTIPLE COATS TO REACH THE REQUIRED D.F.T.
 - E. TOP COAT: SHERWIN-WILLIAMS SHERCRYL HPA-HIGH PERFORMANCE ACRYLIC GLOSS B66-300 SERIES. INSTALL PER PRODUCT DATA SHEET #1.26. APPLY TO A DRY FILM THICKNESS OF 5.0 TO 8.0 MILS D.F.T. THIS WILL REQUIRE A MINIMUM OF TWO COATS TO REACH THE REQUIRED D.F.T.
 - F. TOTAL FILM THICKNESS OF PRIME & TOP COATS: 8.0 TO 12.0 MILS D.F.T.
6. EXECUTION:
 - A. APPLICATION TEMPERATURE: THE APPLICATION, CURING AND METAL TEMPERATURES SHALL BE ABOVE 50 DEGREES FAHRENHEIT (10 DEGREES CELSIUS).
 - B. APPLY PAINT IN ACCORDANCE WITH THE PAINT MANUFACTURER'S RECOMMENDATIONS UNLESS OTHERWISE SPECIFIED.
 - C. COMPLY W/ RECOMMENDATION OF PAINT MANUFACTURER FOR DRYING TIME BETWEEN SUCCEEDING COATS.
 - D. EACH COAT SHALL BE APPROVED BY COUNTY INSPECTOR PRIOR TO APPLYING SUCCEEDING COATS. FOLLOW SSPC-PA2 MEASUREMENT OF DRY COATING THICKNESS WITH MAGNETIC GAGES.
 - E. FINISH COATS SHALL BE SMOOTH AND FREE FROM BRUSH MARKS, STREAKS, LAPS OR PILEUP OF PAINTS, AND SKIPPED OR MISSED AREAS.
 - F. TOUCH UP: THE FINAL FINISH SHALL BE FREE OF SCRATCHES, GOUGES, AND DEFECTS OF ANY KIND. TOUCH UP AND RESTORE FINISH WHERE DAMAGED.
 - G. CLEANING: REMOVE SPILLED, SPLASHED, OR SPATTERED PAINT FROM SURFACES.
 - H. CONTRACTOR SHALL MAINTAIN A DRY FILM GAGE AT THE PROJECT SITE DURING INSPECTIONS. COUNTY INSPECTOR MAY USE THE CONTRACTOR'S DRY FILM GAGE AT INSPECTIONS.



METAL PAINT NOTES

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Kevin R. Boustien</i> CITY ENGINEER	No. Date App. Description	Drawing
Date: 3/14/16		S-4A



NOTE:

A. USE CSR 6 SACK MIX CONCRETE.

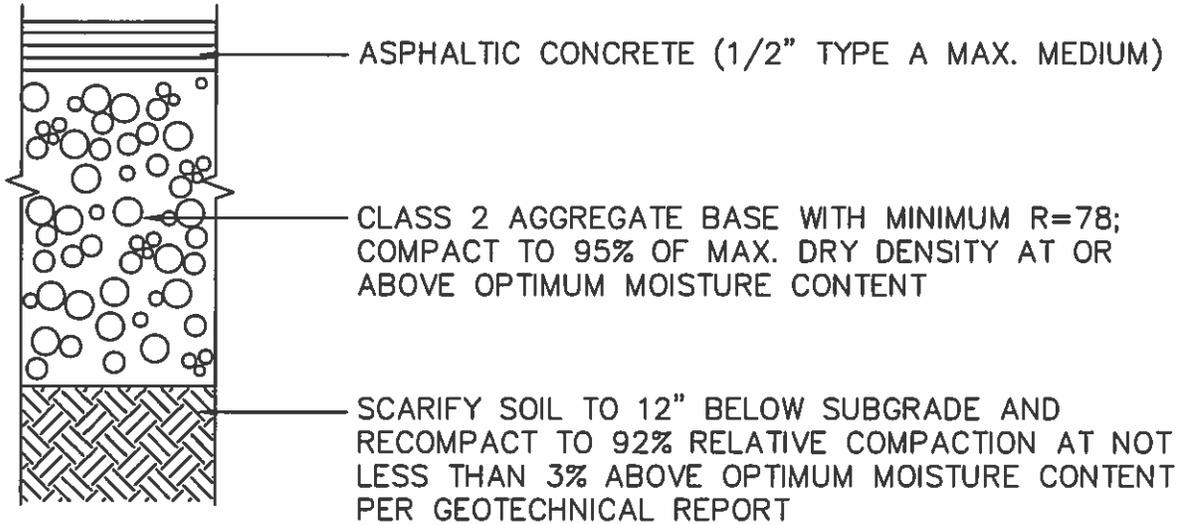
6" CONCRETE PAVING DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Brian R. Boardman*
 CITY ENGINEER
 Date: 3/15/16

Date: March 2016		Scale: NTS	
Revisions			
No.	Date	App.	Description

Drawing S-6



PAVEMENT DESIGN CHART				
AREA	AC	AB	TI	R
PARKING LOT	0.2'	1.3'	5.5	5

NOTES

- A. PAVEMENT SECTIONS INDICATED ARE BASED ON THE FOLLOWING TI AND R-VALUE: TI=5.5, R=5.
- B. PAVEMENT SECTIONS MAY BE REVISED IF REQUIRED BY PUBLIC WORKS BASED ON SUBSEQUENT R-VALUE TESTS.

	AC PAVING PARKING LOT DETAIL					
	Drawn by: SP/ER		Date: March 2016		Scale: NTS	
	Checked by: Jeff Gault <i>JG</i>		Revisions			
	Approved by: <i>Barbara B. Bantle</i>		No.	Date	App.	Description
	CITY ENGINEER					
Date: 3/14/16						
					Drawing S-7	

WOOD FIBER SURFACING SYSTEM:

WOOD FIBER: FIBER SUPPLIED BY FILICE SURFACES, INC., MICHAEL FILICE, (408) 271-8841, OR APPROVED EQUAL. WOOD FIBER SHALL COMPLY WITH CPSC GUIDELINES, ADA REQUIREMENTS, THE FEDERAL HAZARDOUS SUBSTANCES ACT, AND SHALL BE RESISTANT TO FLAMMABILITY, AND IPEMA CERTIFIED. SURFACING SYSTEM SHALL COMPLY WITH ASTM F1292 USING A 12" THICKNESS. MATERIAL SHALL COMPLY WITH ASTM F1951 FOR ACCESSIBILITY OF SURFACE SYSTEMS UNDER AND AROUND PLAY EQUIPMENT. MATERIAL SHALL BE A COMBINATION OF RANDOM SIZED WOOD FIBER COMPRISED OF FIR, PINE, OAK, AND ALDER. WOOD FIBER SHALL PASS THROUGH A 3/4" SCREENING PROCESS AND COMPLY WITH ASTM C136. IT SHALL BE FREE OF TWIGS, BARK, LEAF DEBRIS AND FOREIGN OBJECTS SUCH AS NAILS, TRASH, OR CHEMICAL ADDITIVES, SHALL BE NON-TOXIC AND SHALL NOT CONTAIN RECYCLED WOOD FROM PALLETS OR WASTE WOOD. WOOD FIBER SHALL BE WARRANTED AGAINST BIOLOGICAL DEGRADATION FOR A PERIOD OF 3 YEARS.

FILTER FABRIC: MIRAFI 140N FILTER FABRIC, OR APPROVED EQUAL.

DRAIN ROCK: OPEN GRADED GRAVEL, 3/4" MAXIMUM SIZE, FREE OF ORGANIC MATTER, CLAY OR SILT CONTAMINATION.

WOOD FIBER SURFACING NOTES



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>[Signature]</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-9
Date: 3/16/16		

POURED IN PLACE
RUBBERIZED SURFACING -
1/2" WEARING LAYER OVER
2" SBR BASEMAT LAYER

CONCRETE PAVING

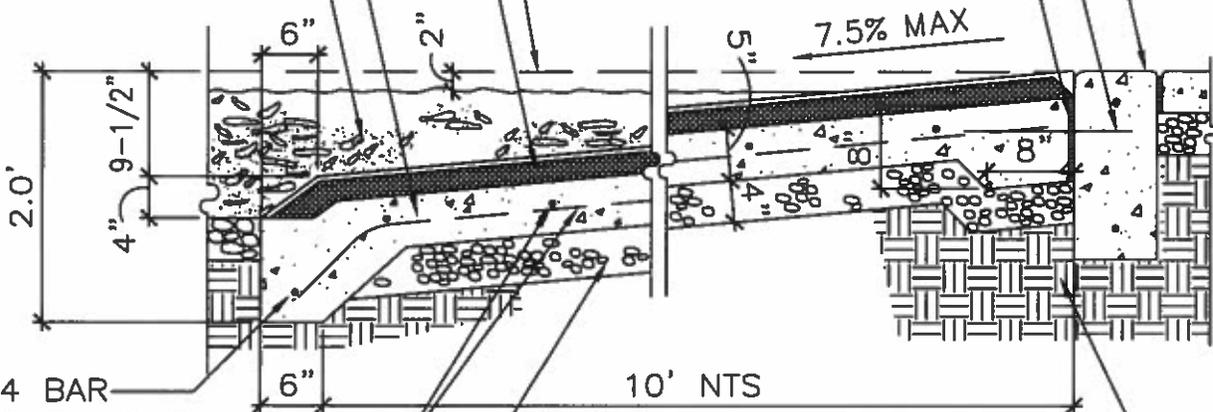
WOOD FIBER
SURFACING SEE
DETAIL S-9

PLAY AREA CURB
SEE DETAIL S-8

1.00' LONG #4 BAR
@ 1.00' O.C. -
WRAP ONE END

EXPANSION JOINT

TOP OF CURB
BEYOND



#4 BAR
CONTINUOUS

#3 BAR @ 1.33' O.C.
EACH WAY; 3" MIN.
FROM EDGES

10' NTS

92% COMPACTED SUBGRADE
@ NOT LESS THAN 3% ABOVE
OPTIMUM MOISTURE CONTENT

CLASS 2 AGGREGATE
BASE; COMPACT TO 95%
OF MAX. DRY DENSITY
AT 2% ABOVE MOISTURE
CONTENT

NOTE:

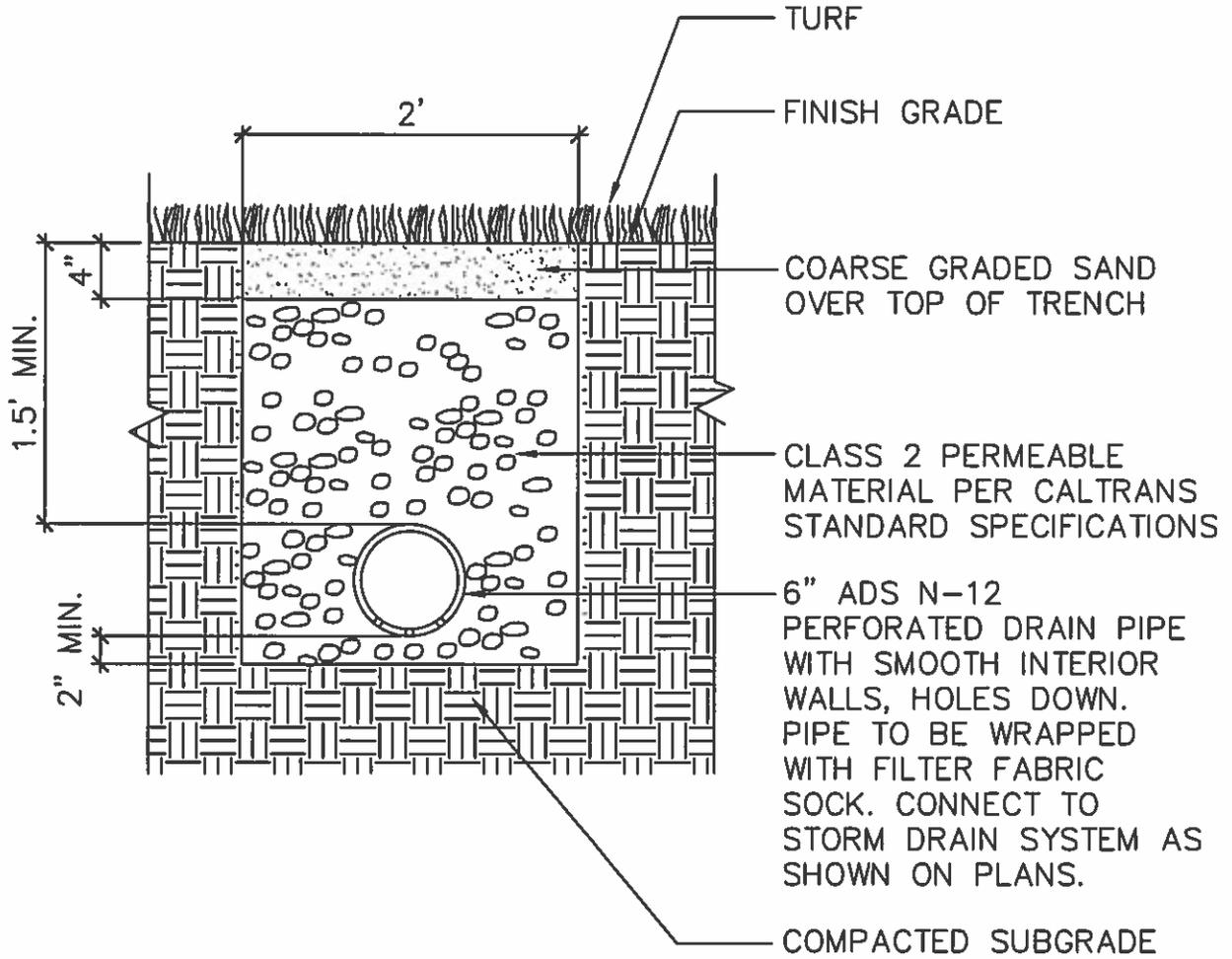
A. USE CSR 6 SACK CONCRETE MIX.

PLAY AREA RAMP DETAIL



Drawn by: SP/ER
Checked by: Jeff Gault
Approved by: *[Signature]*
CITY ENGINEER
Date: 3/14/16

Date: March 2016	Revisions			Scale: NTS
No.	Date	App.	Description	Drawing S-10



NOTE:

A. REQUIRED FOR ALL SWALES IN TURF

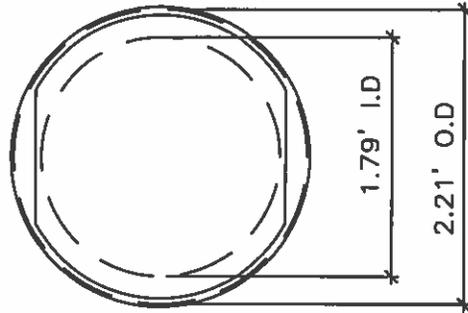
FRENCH DRAIN DETAIL



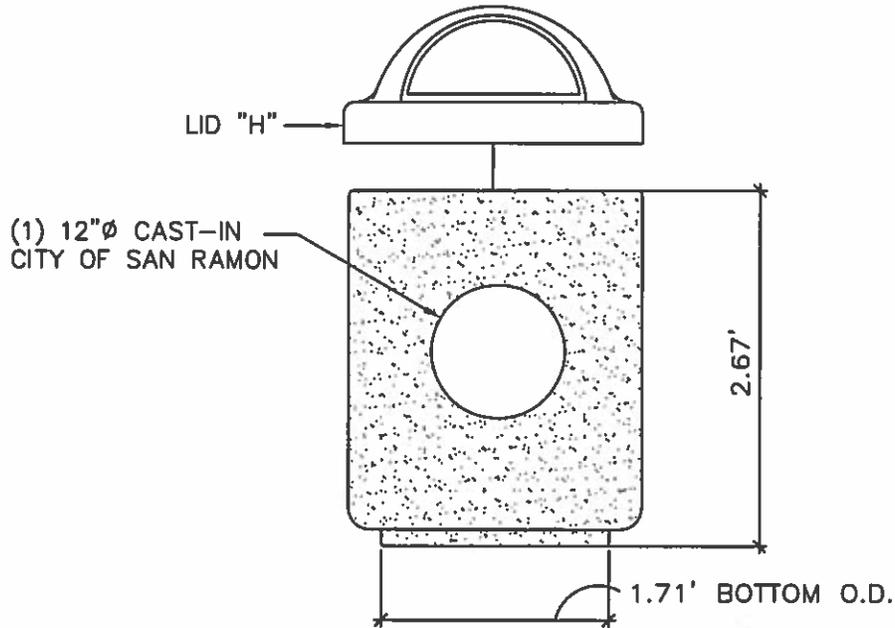
Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Brian R. Bowler*
 CITY ENGINEER
 Date: 3/18/16

Date: March 2016		Scale:	
Revisions		NTS	
No.	Date	App.	Description

Drawing
 S-11



PLAN VIEW



ELEVATION VIEW

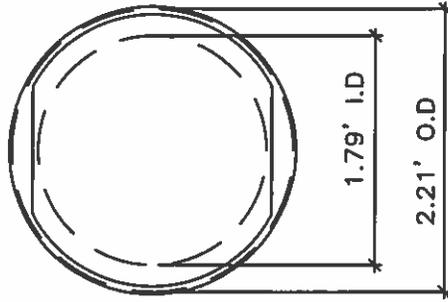
NOTES:

- A. RECYCLED TRASH CONTAINER TO BE CITY OF SAN RAMON STANDARD TRASH CONTAINER WITH CITY OF SAN RAMON LOGO. CALIFORNIA WASTE SERIES MODEL #QR-CAL2632W-H-SANR WITH LINER BY QUICK CRETE PRODUCTS, TEL. (909) 737-6240. COLOR SHALL BE C-2 SAND. FINISH SHALL BE T2-LSB, WITH STANDARD GLOSS SEALER. LID SHALL BE TYPE #H, COLOR BROWN. INCLUDE CABLE AND BOLT ASSEMBLY.
- B. SAN RAMON LOGO TO BE PAINTED PMS#286C (ALL RECESS AREA EXCEPT "CALIFORNIA & INCORPORATED - 1983") THIS TO REMAIN UNPAINTED AS WELL AS BACKGROUND.



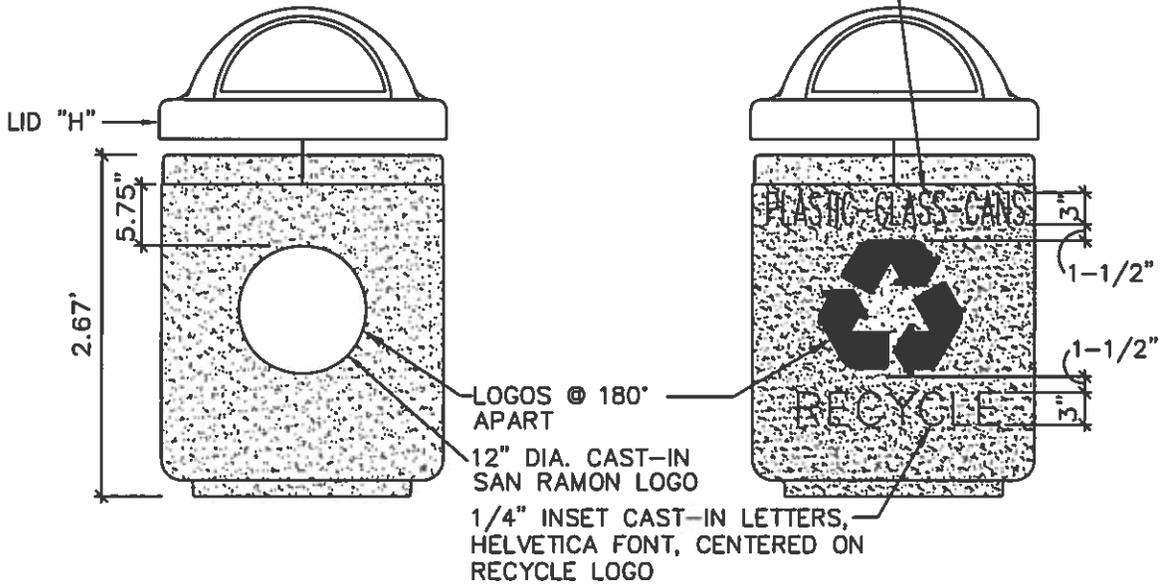
TRASH CONTAINER DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Brian R. Bantler</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-12
Date: 3/14/16		



PLAN VIEW

1/4" INSET CAST-IN LETTERS,
HELvetica CONDENSED FONT,
CENTERED ON RECYCLE LOGO



ELEVATION VIEW

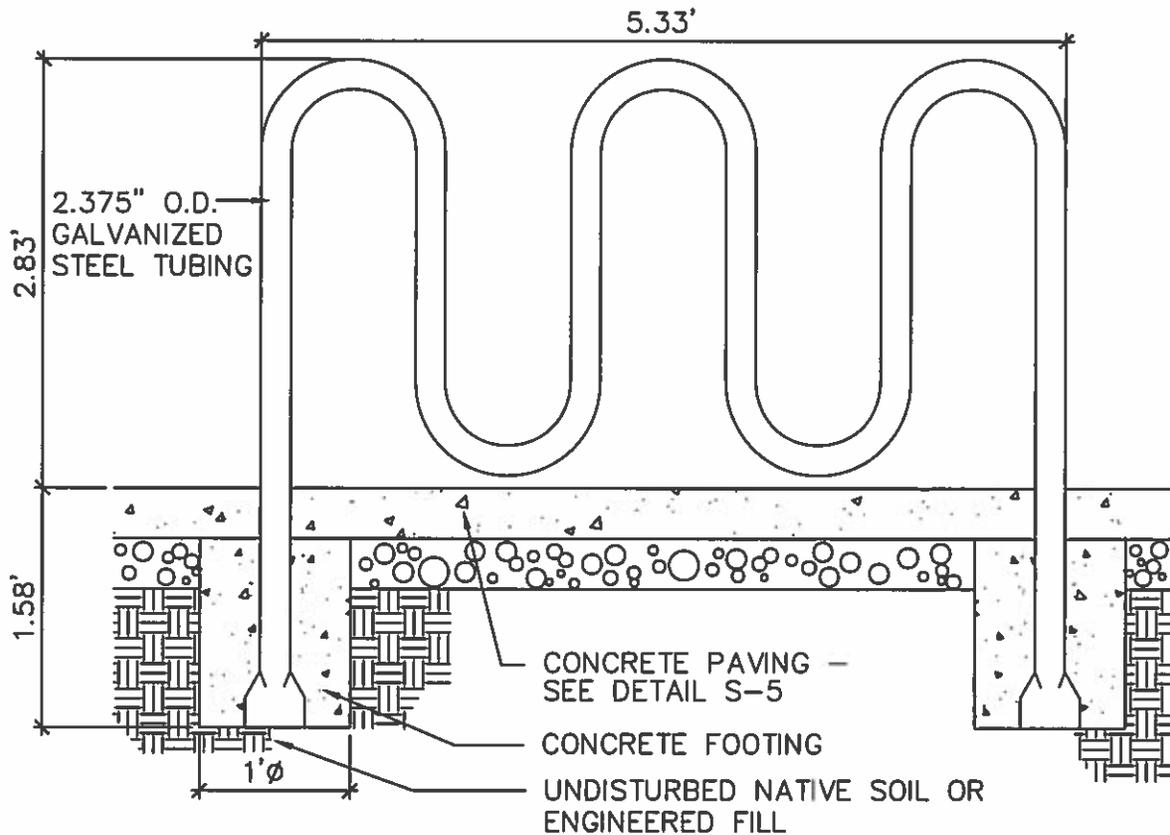
NOTES:

- A. RECYCLED CONTAINER TO BE CITY OF SAN RAMON STANDARD TRASH CONTAINER WITH CITY OF SAN RAMON LOGO. CALIFORNIA SERIES MODEL #QR-CAL2632W-F-SANR WITH Q-PL30D PLASTIC 30 GALLON LINER BY QUICK CRETE PRODUCTS, TEL. (909) 737-6240. COLOR C-2 SAND, FINISH T2-LSB, WITH STANDARD GLOSS SEALER. LID SHALL BE TYPE #H, COLOR RECYCLE GREEN. INCLUDE CABLE AND BOLT ASSEMBLY & TAMPER PROOF BOLT WRENCH.
- B. SAN RAMON LOGO TO BE PAINTED PMS#2B6C (ALL RECESS AREA EXCEPT "CALIFORNIA & INCORPORATED - 1983") THIS TO REMAIN UNPAINTED AS WELL AS BACKGROUND. RECYCLE LOGO, "PLASTIC-GLASS-CANS" & "RECYCLE" TO BE PAINTED RECYCLE GREEN COLOR.

RECYCLING CONTAINER DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Barbara A. Boudreau</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-13
Date: 3/14/16		



NOTES:

- A. LANDSCAPE STRUCTURES MODEL #100102A, LONG LOOP RACK FOR SEVEN BICYCLES. COLOR AS SPECIFIED. AVAILABLE FROM ROSS RECREATION EQUIPMENT CO., (707) 526-4800, OR APPROVED EQUAL.
- B. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

BICYCLE RACK DETAIL



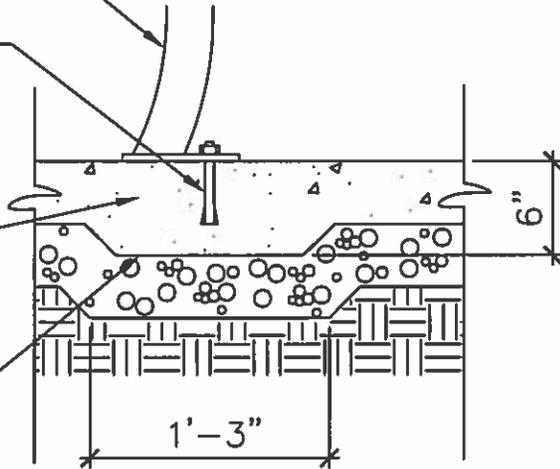
Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Brian R. Boudreau</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-14
Date: 3/14/16		

BENCH LEG

3/8" X 4" STAINLESS
STEEL WEDGE ANCHOR -
DEFORM BOLT END AFTER
TIGHTENING

CONCRETE PAVING,
SEE DETAIL S-5

THICKEN SLAB TO
ACCOMMODATE BENCH
ANCHORS



NOTES:

- A. BENCH SHALL BE AS SPECIFIED
- B. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.

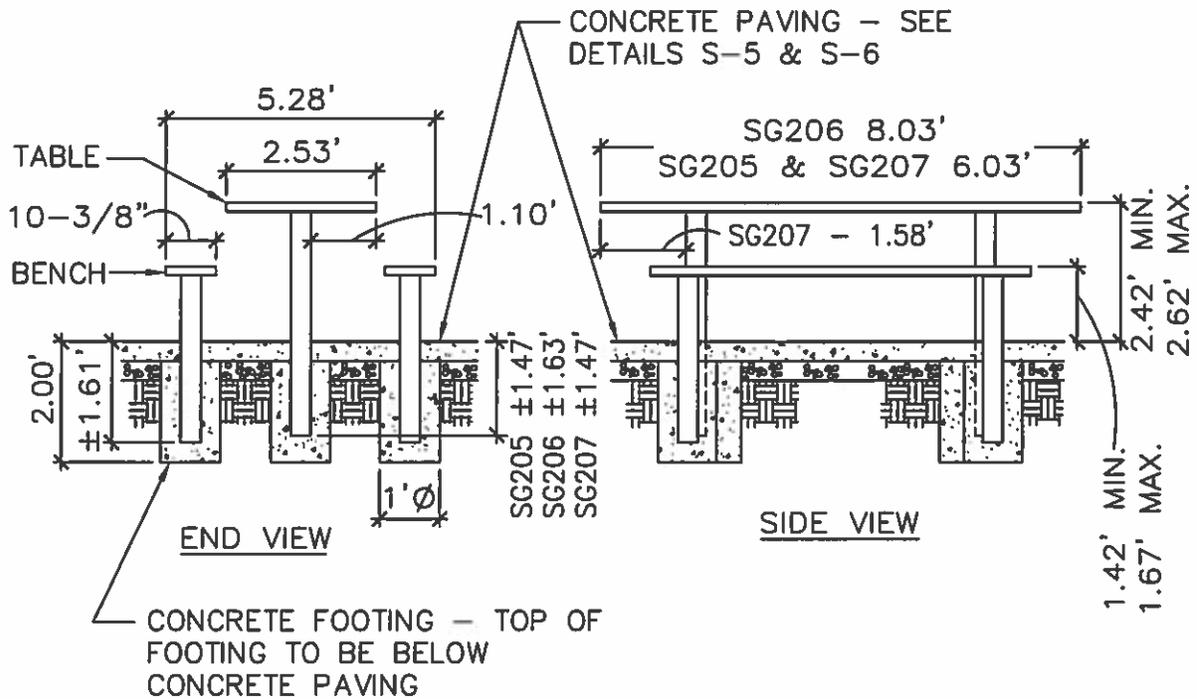
BENCH ATTACHMENT DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault *JG*
 Approved by: *Brian N. Bartlett*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Revisions	
No.	Date	App.	Description

Scale:
NTS
Drawing
S-16

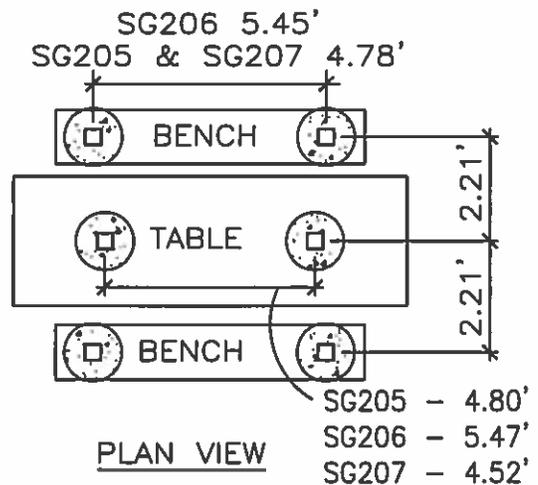


NOTES:

A. PICNIC TABLES TO BE WABASH VALLEY SIGNATURE SERIES WITH DIAMOND PATTERN TOP, AVAILABLE FROM O'KEEFE COMPANY, TEL. (510) 558-0140, COLOR AS SPECIFIED.

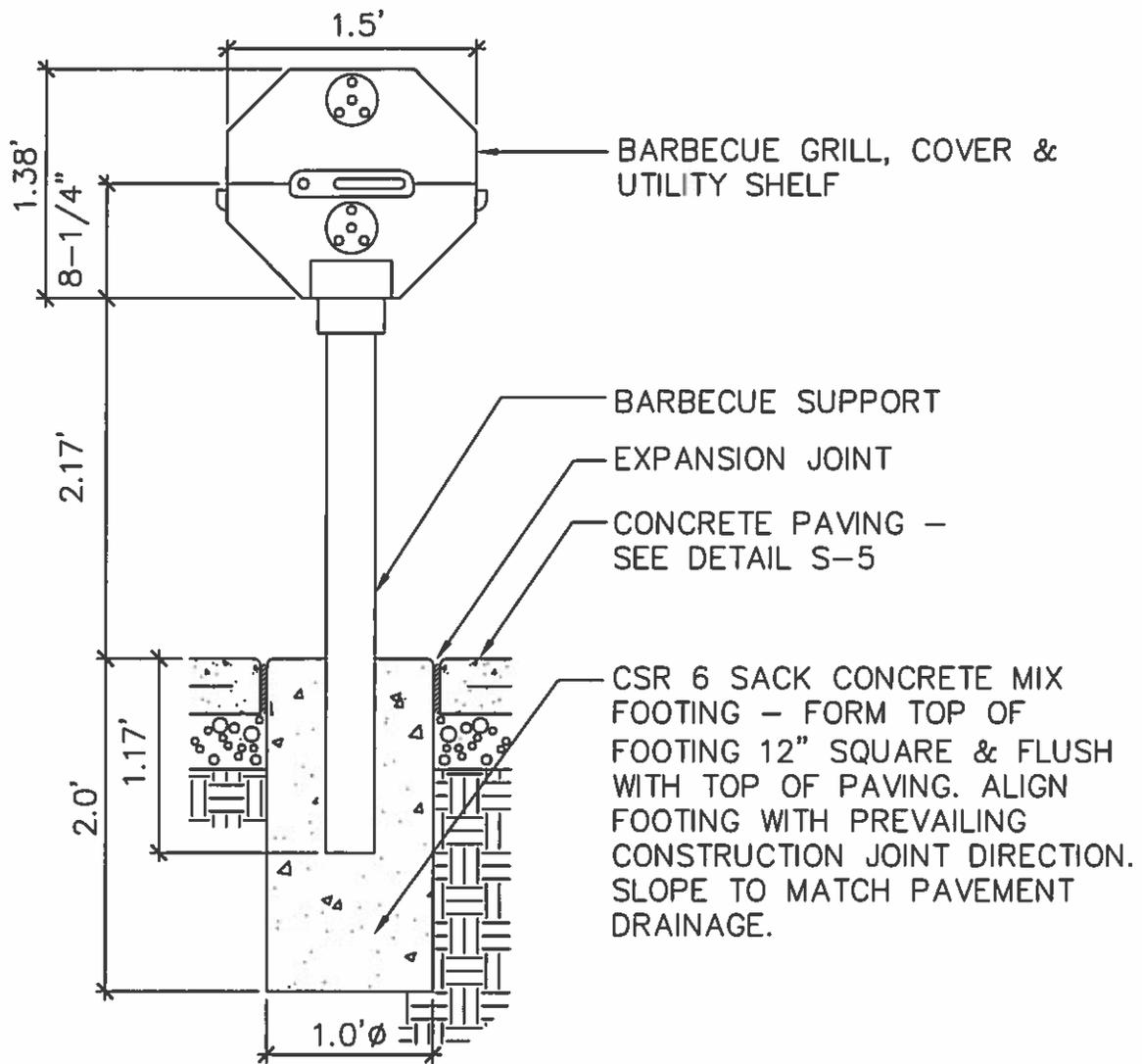
- STANDARD 6' TABLE #SG205D
- STANDARD 8' TABLE #SG206D
- ADA ACCESSIBLE TABLE #SG207D

B. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



PICNIC TABLE DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Bevin R. Brumley</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-17
Date: 3/14/16		



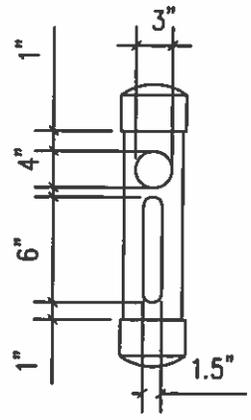
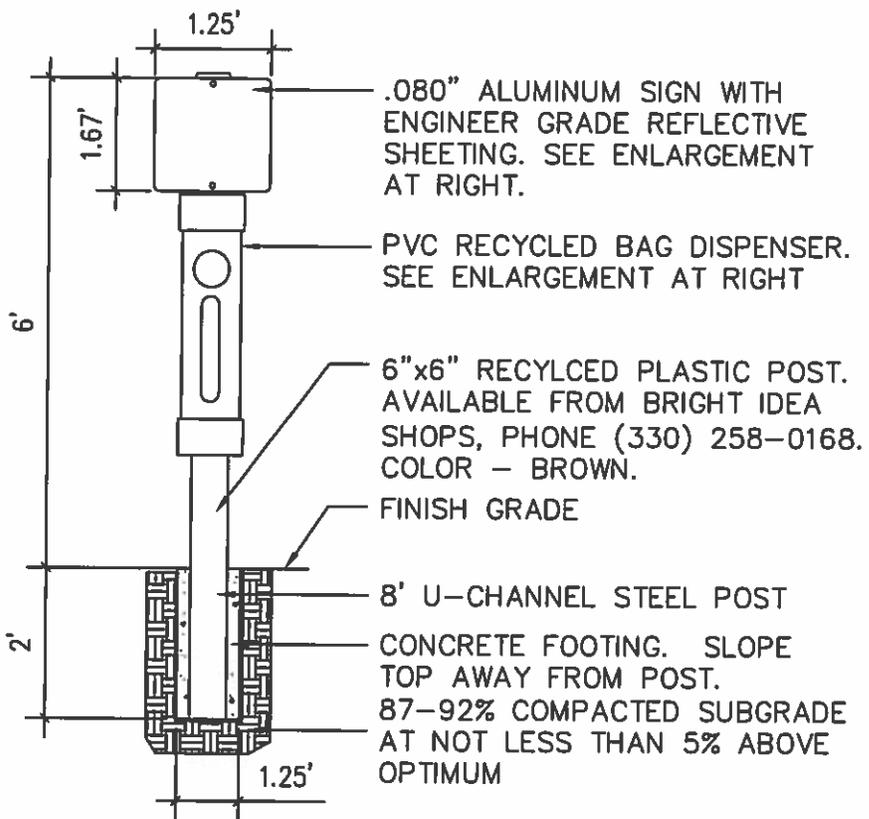
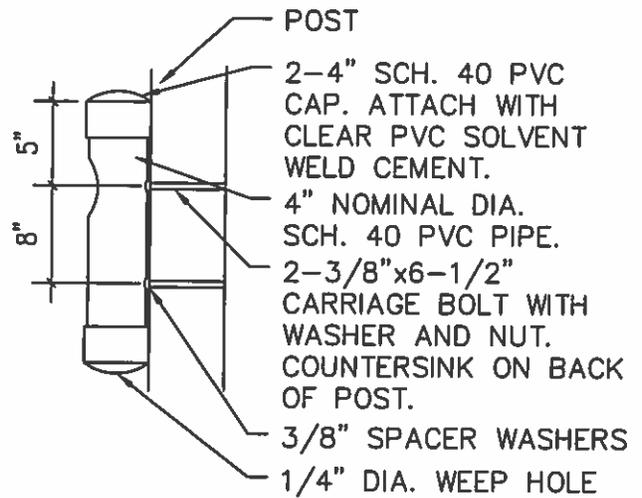
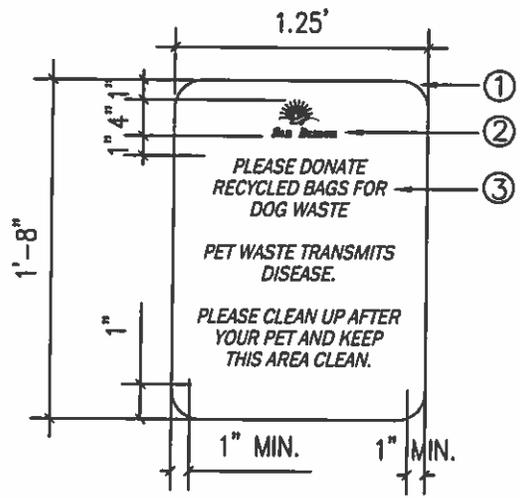
NOTES:

- A. UPBEAT MODEL RJT-EC-40B2 COVERED GRILL WITH MODEL RJT-EC-S UTILITY SHELF DISTRIBUTED BY UPBEAT INCORPORATED, TEL. (314) 535-5005, WWW.UPBEATING.COM.
- B. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



BARBECUE DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>William B. Bostler</i> CITY ENGINEER	No. Date App. Description	Drawing
Date: 3/14/16		S-18



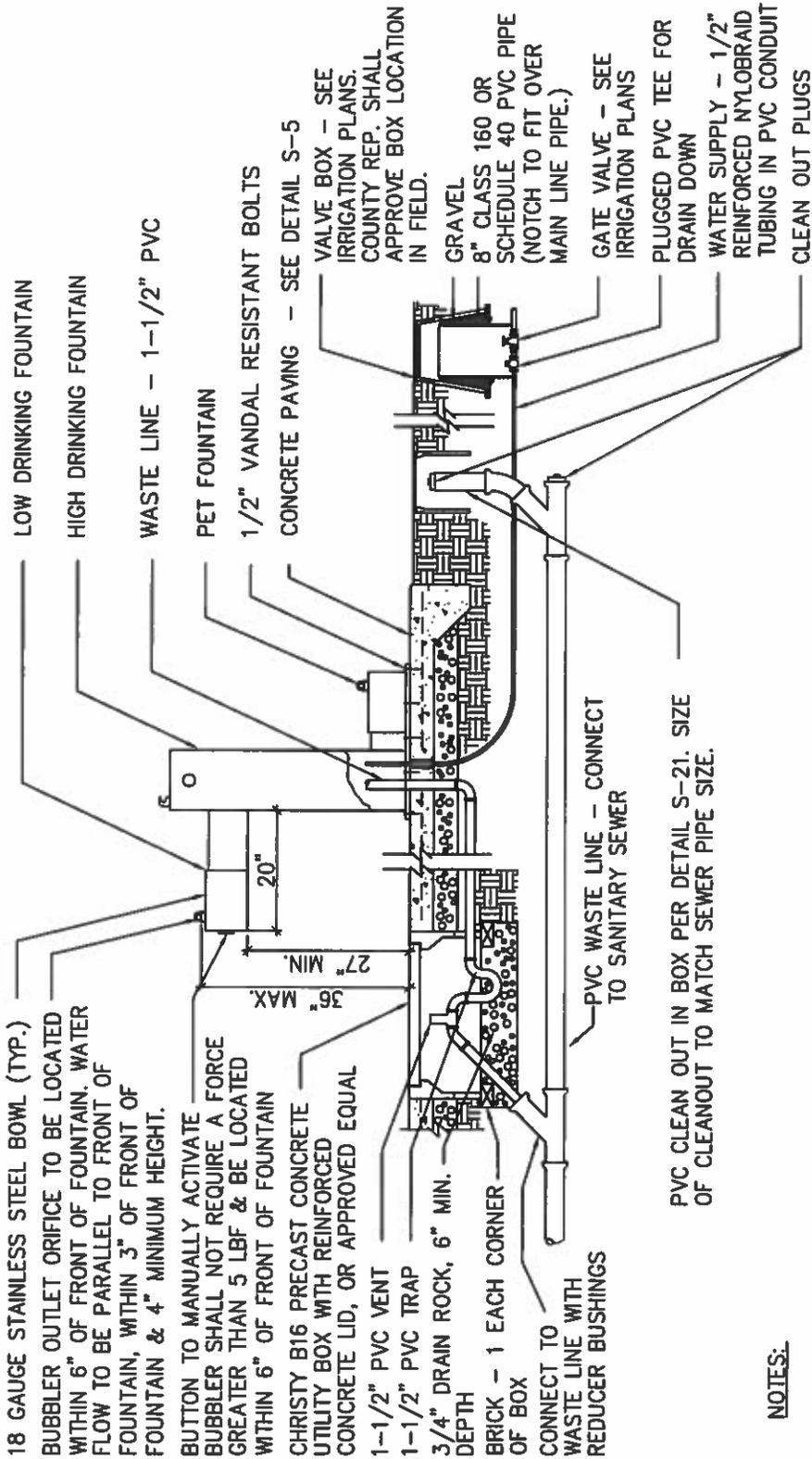
- ① 3/4 RADIUS TYPICAL
- ② CITY OF SAN RAMON LOGO: CONTRACTOR TO OBTAIN ELECTRONIC FORM FROM THE CITY.
- ③ COLOR: BLUE;
FONT: HELVETICA
HEIGHT: 1"
COLOR: BACKGROUND - WHITE ; LETTERS - BLUE

NOTES:
A. DOG WASTE RECEPTACLE PER THE CITY STANDARD. THE CONTRACTOR SHALL COORDINATE WITH THE CITY FOR PROCUREMENT.



DOG WASTE RECEPTACLE DETAIL

Drawn by: SP/ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	
Approved by: <i>Ben R. Boudin</i>	No. Date App. Description	
CITY ENGINEER		Drawing S-19
Date: 3/14/16		



NOTES:

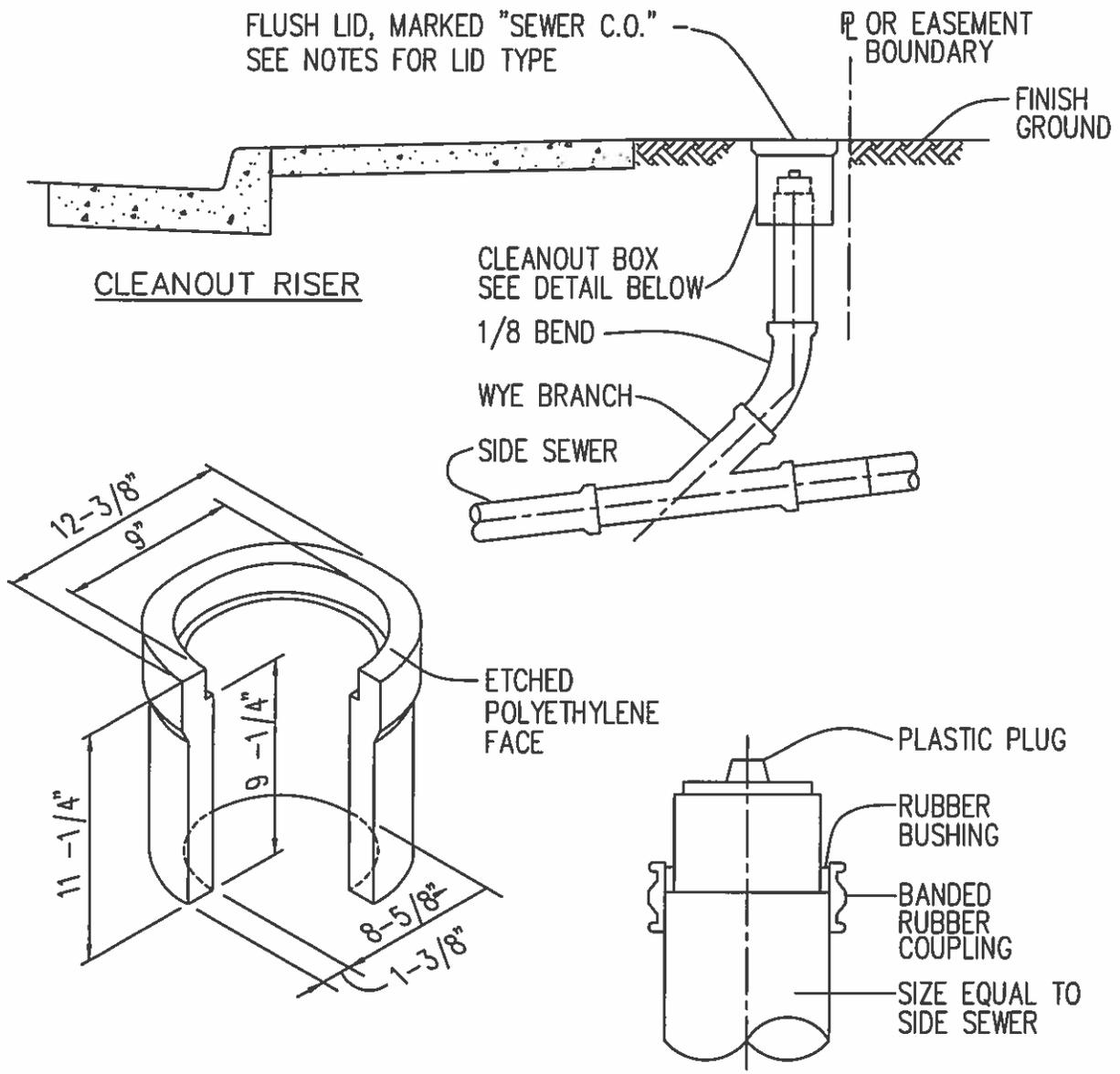
- A. DRINKING FOUNTAIN TO BE MDF MODEL #3800SM, HI-LO-PET FOUNTAIN, SURFACE MOUNTED, WITH AGGREGATE FINISH, MANUFACTURED BY MOST DEPENDABLE FOUNTAINS, (800) 552-6331.
- B. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND GOVERNING CODES.
- C. SEE DRAWINGS FOR LOCATION OF SANITARY SEWER CLEANOUT.

DRINKING FOUNTAIN DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Tommy R. Brantley*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale: NTS	
Revisions		Drawing S-20	
No.	Date	App.	Description



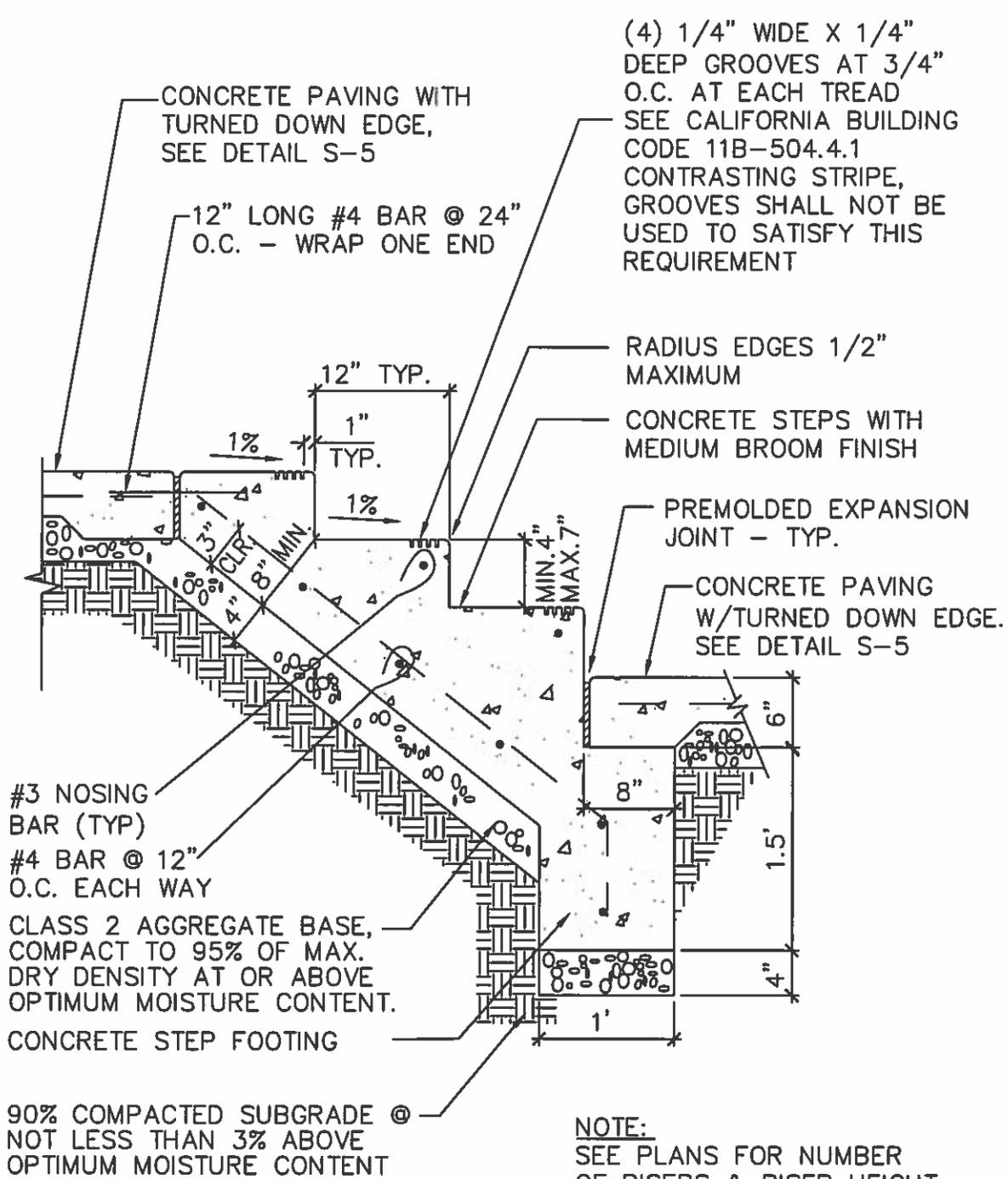
NOTES:

- A. BOX TO BE CHRISTY F1 CURB VALVE BOX OR EQUAL.
- B. LID IN TURF AREAS TO BE CHRISTY FL8D FIBRELYTE; LID IN PAVEMENT & SHRUB AREAS TO BE CHRISTY F8D REINFORCED CONCRETE; OR EQUAL.



DRINKING FOUNTAIN CLEAN OUT DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>David R. ...</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-21
Date: 3/14/16		



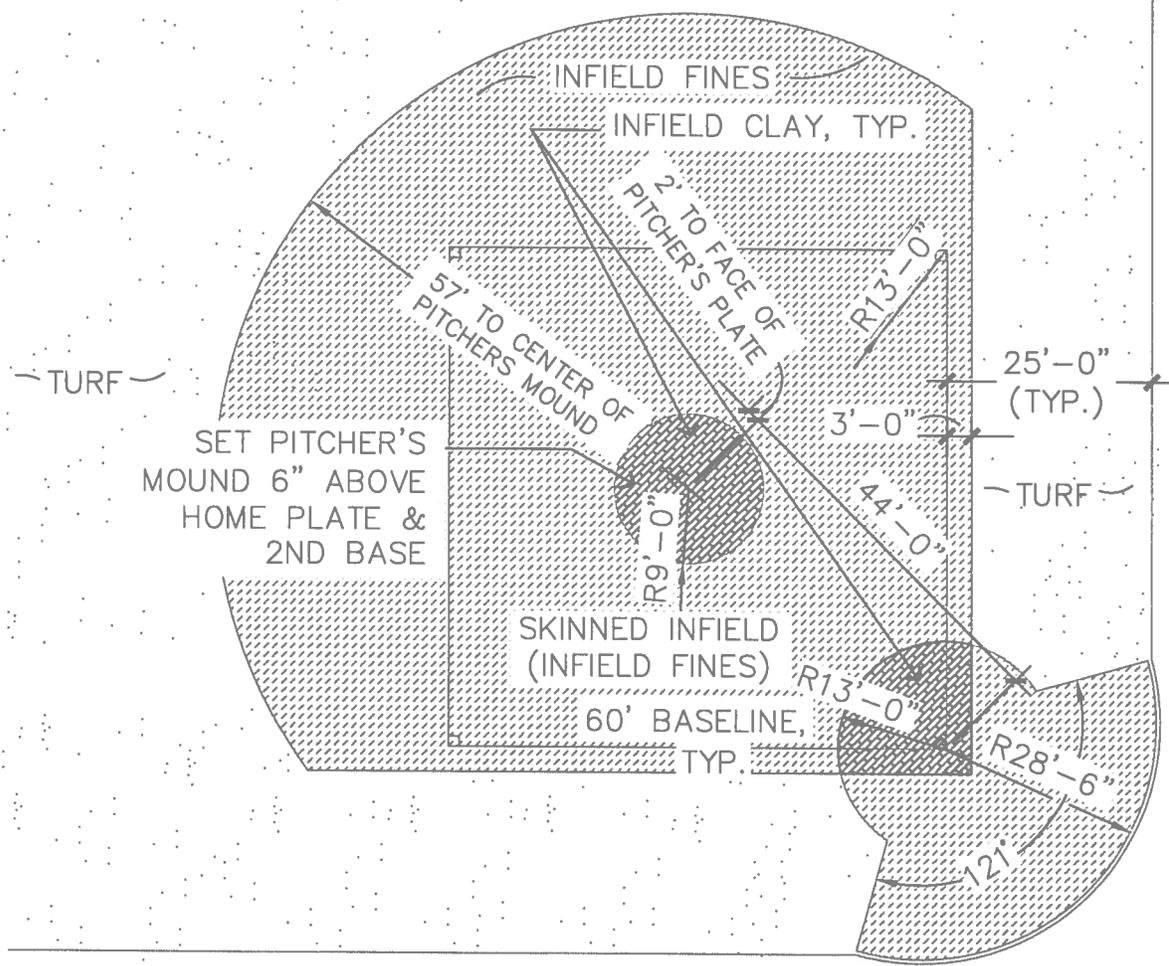
CONCRETE STEPS DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Brian R. Boudreau*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale: NTS	
Revisions			
No.	Date	App.	Description

Scale: NTS
 Drawing S-22



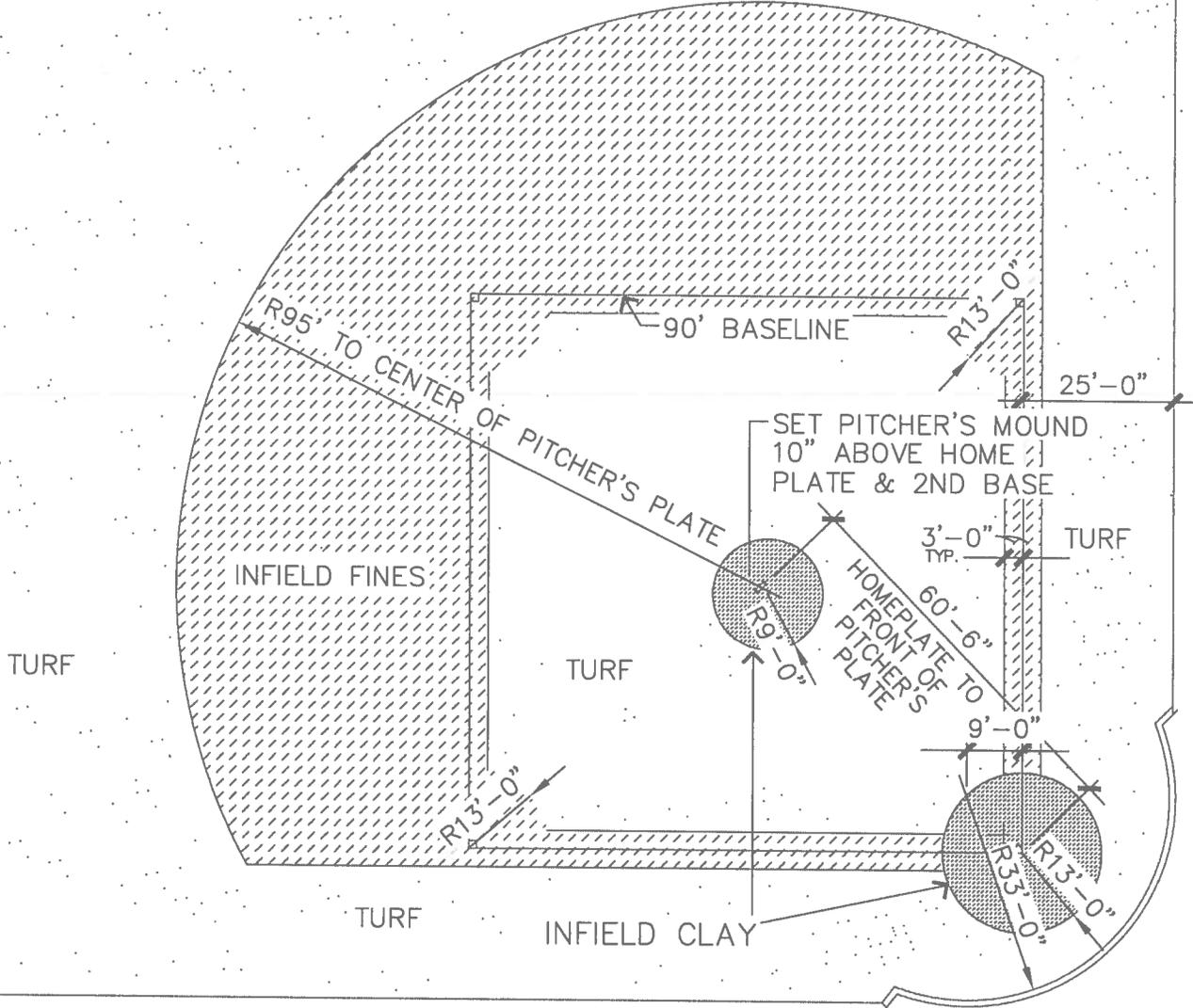
60' BASEBALL DIAMOND LAYOUT



Drawn by: SP/ER
 Checked by: Jeff Gault *JG*
 Approved by: *Paul R. Banta*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Scale:	
Revisions		NTS	
No.	Date	App.	Description

Scale:
 NTS
 Drawing
 S-23



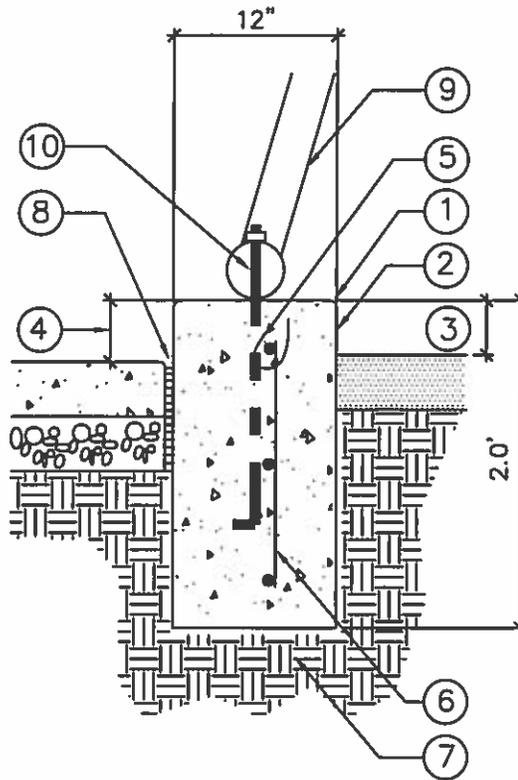
90' BASEBALL DIAMOND LAYOUT



Drawn by: SP/ER
 Checked by: Jeff Gault *JG*
 Approved by: *Ben R. Bonate*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Revisions	
No.	Date	App.	Description

Scale: NTS
 Drawing S-24



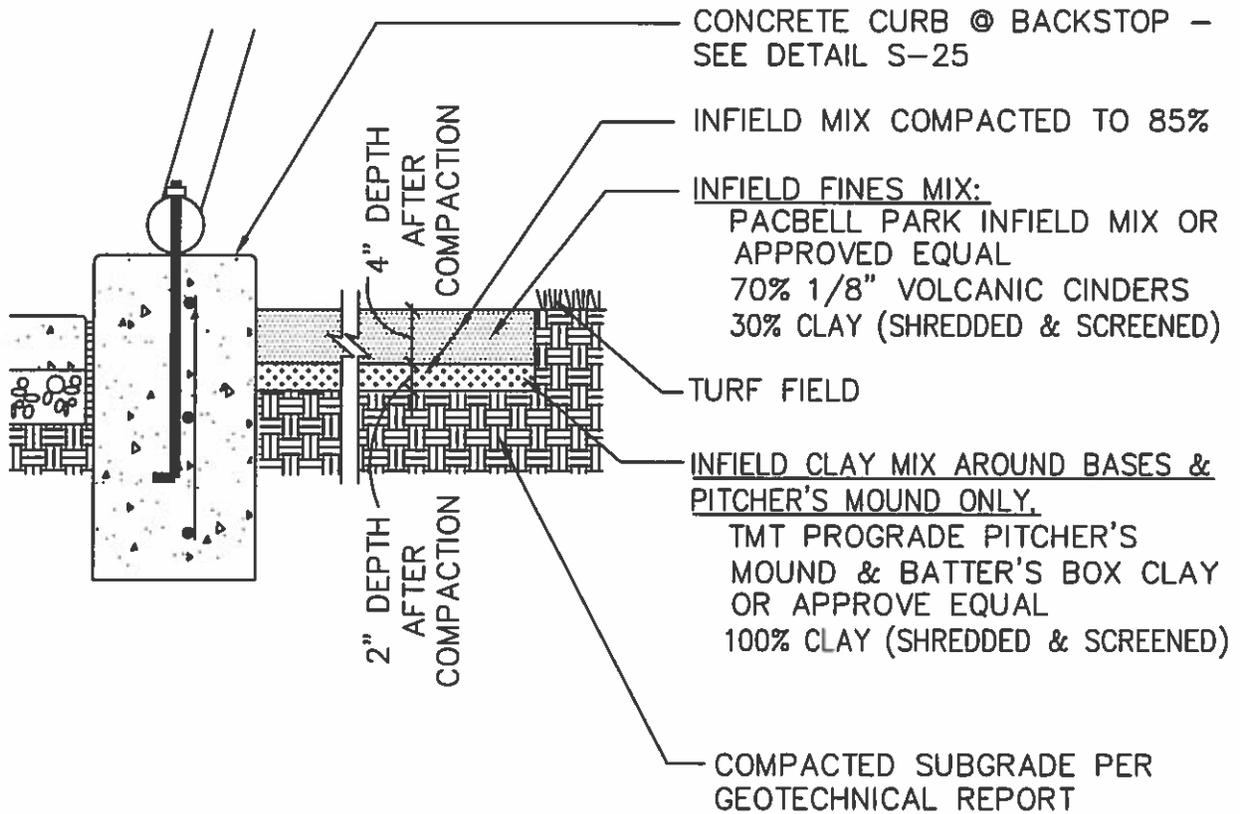
- ① 1/2" RADIUS TOOLED EDGE, TYP.
- ② LIGHT BROOM FINISH
- ③ FIELD SIDE: VARIES 1/2" TO 4"
- ④ PAVEMENT SIDE: VARIES 2" TO 6"
- ⑤ 3 #4 BARS, HORIZONTAL, CONTINUOUS
- ⑥ #3 BARS VERT. AT 24" O.C.
- ⑦ COMPACTED SUBGRADE
- ⑧ 1/2" EXPANSION JOINT WITH SEALANT
- ⑨ BACKSTOP – PATTERSON WILLIAMS MODEL #1216 ARCHED BASEBALL BACKSTOP (62'W X 20'H X 20'D) AVAILABLE FROM DAVID O'KEEFE COMPANY, (510) 558-0140, OR APPROVED EQUAL.
- ⑩ ANCHOR BOLTS AT 5' O.C. PER MANUFACTURERS' DRAWING, 1/2"Ø GALVANIZED, EMBED 6". (OK TO DRILL AND SECURE WITH SIMPSON "ET" EPOXY, EMBED 5".)

NOTE:
 INSTALL VERTICAL SCORE JOINTS @ ±10' O.C. AND
 EXPANSION JOINTS @ ±20' O.C. ALIGN WITH NEAREST
 PAVEMENT JOINT WHERE POSSIBLE.

CONCRETE CURB @ BACKSTOP DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:	NTS
Checked by: Jeff Gault	Revisions		
Approved by: <i>Kevin H. Brantley</i> CITY ENGINEER	No.	Date	App. Description
Date: 3/14/16			
			Drawing
			S-25



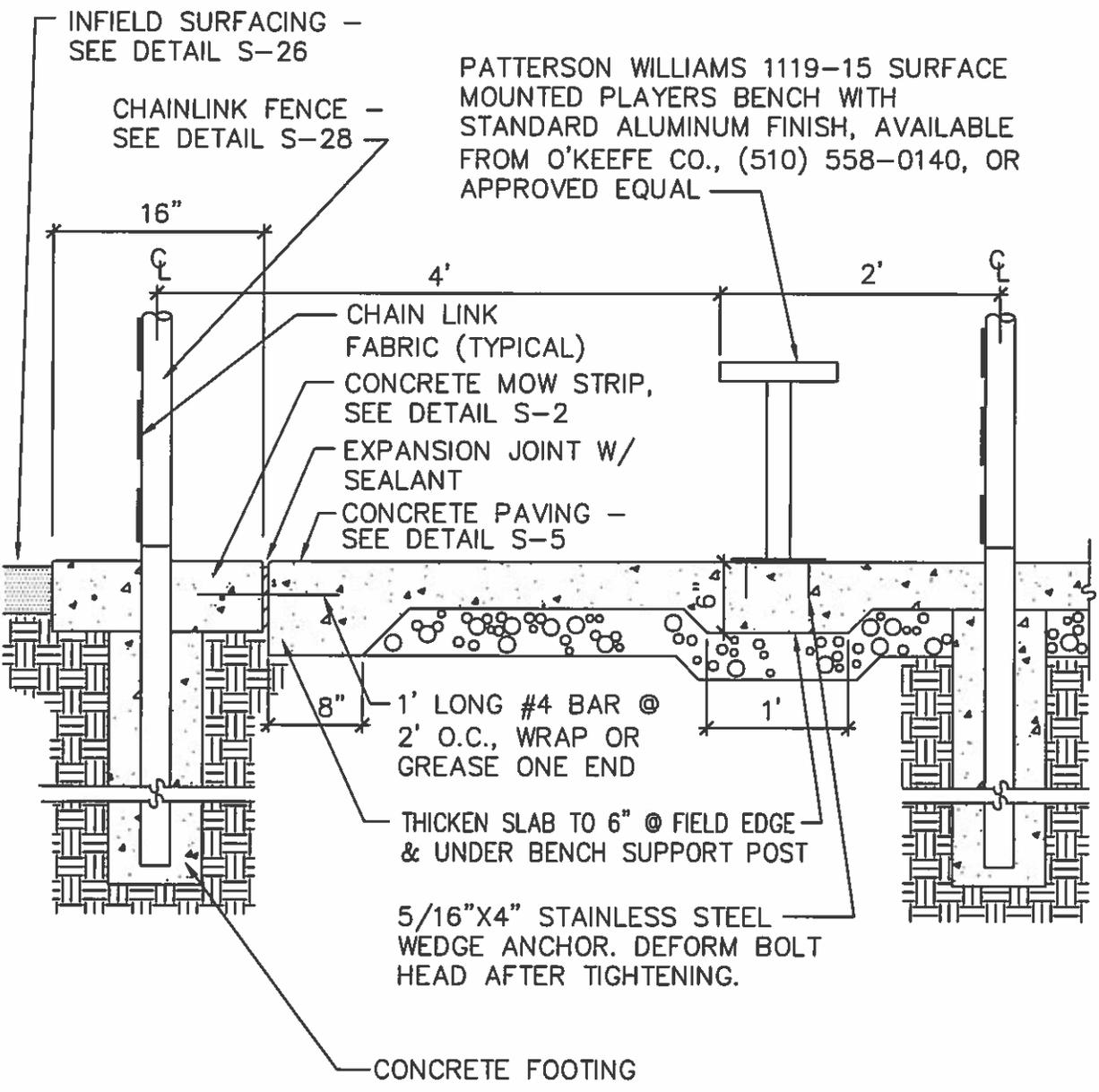
NOTES

- A. INFIELD MIX SHALL BE UNIFORMLY BLENDED, FREE OF ROCK, DEBRIS, VEGETATION, AND FOREIGN MATERIALS. MIXES SHALL BE STERILIZED TO KILL WEEDS. SCREEN INFIELD FINES MIX TO 5MM AND INFIELD CLAY MIX TO 9MM. AVAILABLE FROM TMT ENTERPRISES, INC. OR EQUAL, TEL. 408-432-9040.
- B. SPREAD INFIELD MIX IN 2" LIFTS. WATER LIGHTLY AND COMPACT WITH ROLLER AFTER EACH LIFT.
- C. RECOMPACT TO 85% UNTIL FINAL GRADE ELEVATION IS ACHIEVED.

INFIELD SURFACING DETAIL



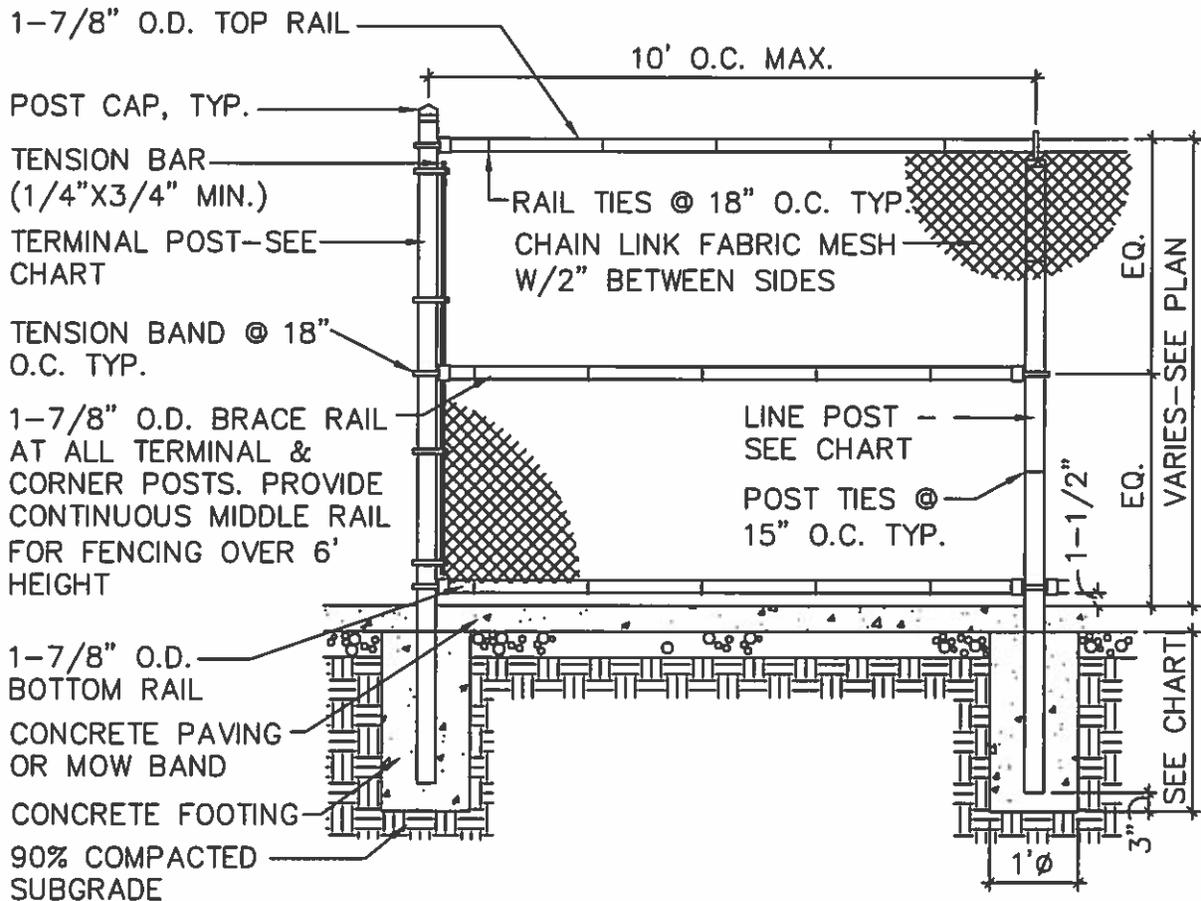
Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>David Bunker</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-26
Date: 3/14/16		



DUGOUT DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Bevin Bandlen</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-27
Date: 3/14/16		



	10' FENCE	6' FENCE
TERMINAL & GATE POSTS	2-1/2" STD. (2-7/8" O.D.)	2" SCH. 10 (2-3/8" O.D.)
LINE POSTS	2-1/2" STD. (2-7/8" O.D.)	1-1/2" SCH. 10 (1-7/8" O.D.)
TERMINAL POST FOOTING DEPTH	4.0'	3.0'
LINE POST FOOTING DEPTH	4.0'	2.5'

NOTES:

- A. INSTALL CHAIN LINK FABRIC MESH ON FIELD SIDE OF 10' FENCE & DUGOUT SIDE OF 6' FENCE.
- B. INSTALLATION & MATERIALS SHALL COMPLY WITH CHAIN LINK FENCING NOTES, SEE DETAIL S-29.



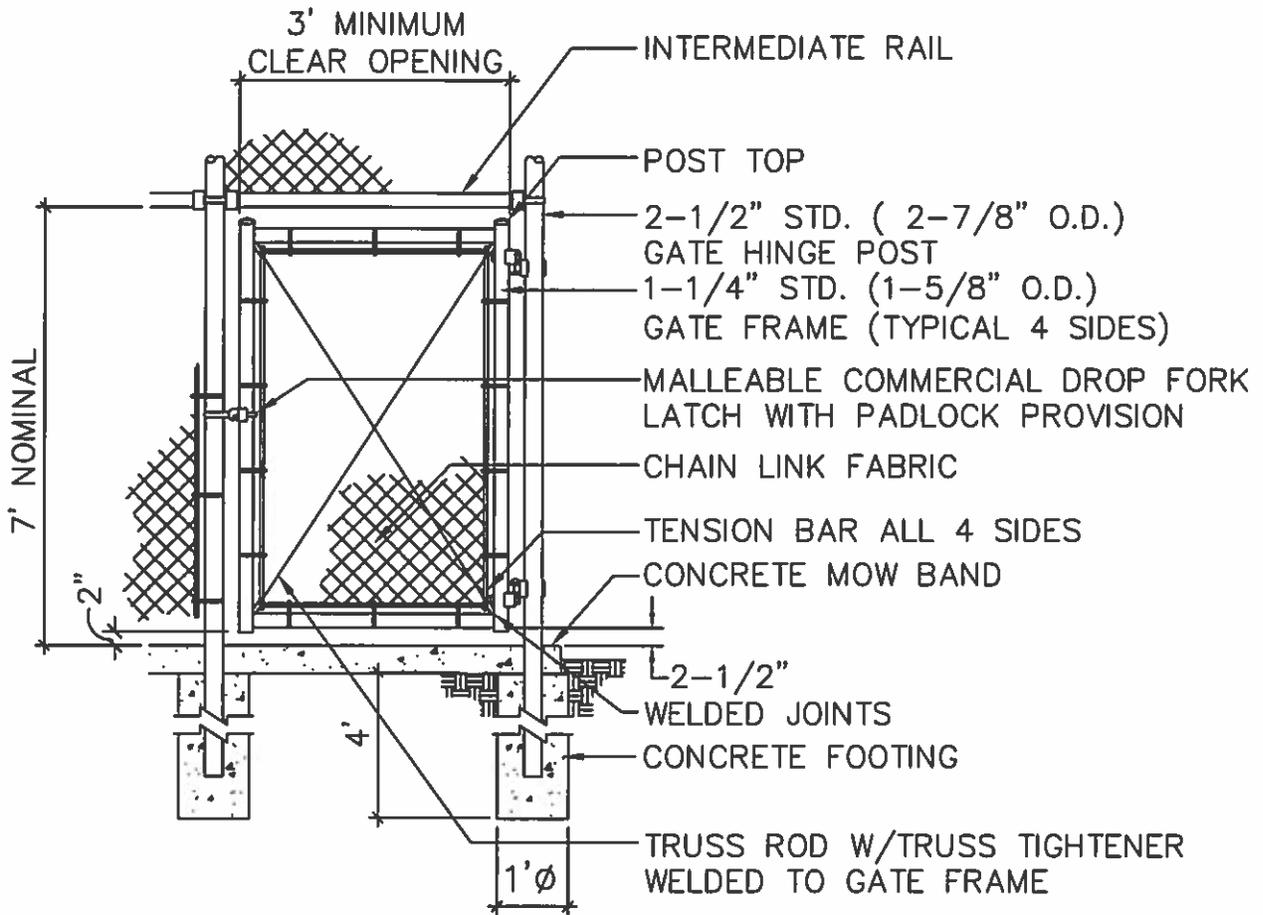
CHAIN LINK FENCE DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Wain R. Brantley</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-28
Date: 3/14/16		

CHAIN LINK FENCING NOTES:

1. ALL MATERIALS SHALL CONFORM TO SECTION 80-3 OF THE CALTRANS STANDARD SPECIFICATIONS EXCEPT AS MODIFIED BY THESE SPECIFICATIONS.
2. SUBMITTALS:
 - A. MANUFACTURER'S CATALOG INFORMATION INDICATING SIZE, MATERIALS, FINISHES AND QUANTITIES OF ITEMS BEING SUPPLIED.
 - B. CERTIFICATES OF COMPLIANCE FOR ALL MATERIALS STATING THE REQUIRED SPECIFICATIONS AND THE COMPLIANCE OF MATERIALS TO SPECIFICATIONS.
3. GALVANIZED CHAIN LINK FABRIC @ BASEBALL FENCE: 9 GAUGE CORE WIRE MEASURING 2" BETWEEN PARALLEL SIDES, COMPLYING WITH ASTM A392. FINISH TO BE GALVANIZED WITH NOT LESS THAN 1.2 OZ. ZINC COATING PER SQUARE FOOT OF UNCOATED WIRE SURFACE ON WIRE COATED BEFORE WEAVING. FABRIC SHALL BE KNUCKLED TOP AND BOTTOM.
4. GALVANIZED STEEL POSTS AND FRAMING @ BASEBALL FENCE: TYPE I GALVANIZED, ROUND PIPE, SIZE AS SHOWN ON DRAWINGS. FINISH TO BE GALVANIZED STEEL CONFORMING TO ASTM A123.
5. TIE WIRES: SHALL CONFORM TO SECTION 80-4.01C OF THE CALTRANS STANDARD SPECIFICATIONS.
6. TENSION ROD, BARS, BANDS AND FITTINGS: TYPE 1 HOT DIPPED GALVANIZED STEEL CONFORMING TO ASTM A123.
 - A. TENSION BAR: NOT BE LESS THAN 1/4" X 3/4" AND NOT LESS THAN 2" SHORTER THAN THE NOMINAL HEIGHT OF THE FABRIC. ONE TENSION BAR SHALL BE PROVIDED FOR EACH END POST AND TWO FOR EACH PULL POST PER PLANS.
 - B. ATTACHMENT BOLT: 3/8" X 1-1/4" GALVANIZED CARRIAGE BOLTS WITH NUTS, ONE AT EACH TENSION BAR BAND. NUTS AND BOLTS SHALL BE GALVANIZED.
 - C. TRUSS ROD: 3/8" HOT-DIP GALVANIZED STEEL RODS WITH GALVANIZED TURNBUCKLES. TIE TURNBUCKLES ON TRUSS RODS WITH TIE WIRES TO FENCE FABRIC TO PREVENT LOOSENING BY VANDALS.
 - D. FITTINGS: FITTINGS TO BE MALLEABLE, CAST IRON OR PRESSED STEEL.
 - E. POST TOP: HEAVY ORNAMENTAL TOPS TO BE APPROVED BY COUNTY REPRESENTATIVE. BASE OF TOP TO CARRY APRON AROUND OUTSIDE OF POST, AND SHALL BE SECURELY FASTENED TO POSTS.
7. FENCE INSTALLATION: INSTALL FABRIC, ACCESSORIES AND BRACES IN ACCORDANCE WITH ANSI/ASTM F567 AND MANUFACTURER'S INSTRUCTIONS. STRETCH FABRIC BETWEEN TERMINAL POSTS OR AT INTERVAL OF 100 FEET MAXIMUM, WHICHEVER IS LESS. FASTEN FABRIC TO TOP RAIL, BOTTOM RAIL AND BRACES WITH TIE WIRE AT SPACING INDICATED ON DRAWINGS AND IN SPECIFICATIONS. ATTACH FABRIC TO END AND PULL POSTS WITH TENSION BARS AND TENSION BAR CLIPS. INSTALL QUANTITY OF FENCE POSTS SHOWN AT BASEBALL FENCING.
8. GATES SHALL BE INSTALLED PLUMB AND LEVEL AND ALL HARDWARE SHALL BE ADJUSTED TO PROVIDE FOR SMOOTH OPERATION. AFTER ADJUSTMENTS, APPLY WELD BEAD ABOVE HINGE TO SECURE IT. GATES SHALL BE CONSTRUCTED OF 1-5/8" O.D. PIPE, AND SHALL PROVIDE 7' OF OVERHEAD CLEARANCE WITH A TRANSOM FENCE PANEL LOCATED ABOVE THE GATE.

CHAIN LINK FENCE NOTES					
	Drawn by: SP/ER	Date: March 2016		Scale: NTS	
	Checked by: Jeff Gault <i>JG</i>	Revisions			
	Approved by: <i>Brian R. Boudreau</i>	No.	Date	App.	Drawing S-29
	CITY ENGINEER			Description	
	Date: 3/14/14				



NOTES:

- A. GATE MATERIALS TO MATCH FENCE. SEE DETAIL S-25 AND S-29
- B. COMPLY WITH CURRENT ADA REQUIREMENTS

CHAIN LINK GATE DETAIL

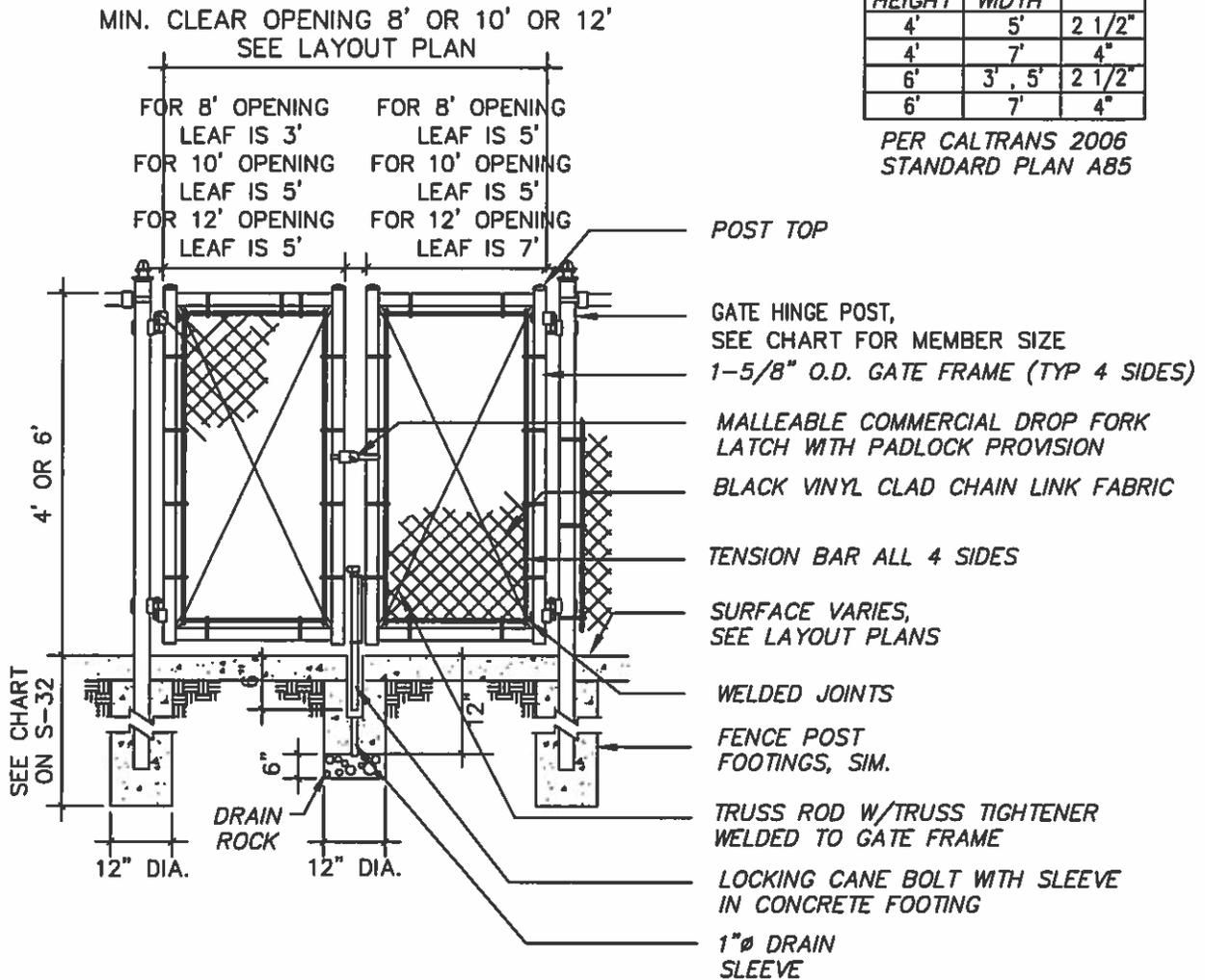


Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Brian R. Bountin</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-30
Date: 3/14/16		

FENCE MEMBER DIMS.

FENCE HEIGHT	LEAF WIDTH	POST
4'	5'	2 1/2"
4'	7'	4"
6'	3', 5'	2 1/2"
6'	7'	4"

PER CALTRANS 2006 STANDARD PLAN A85



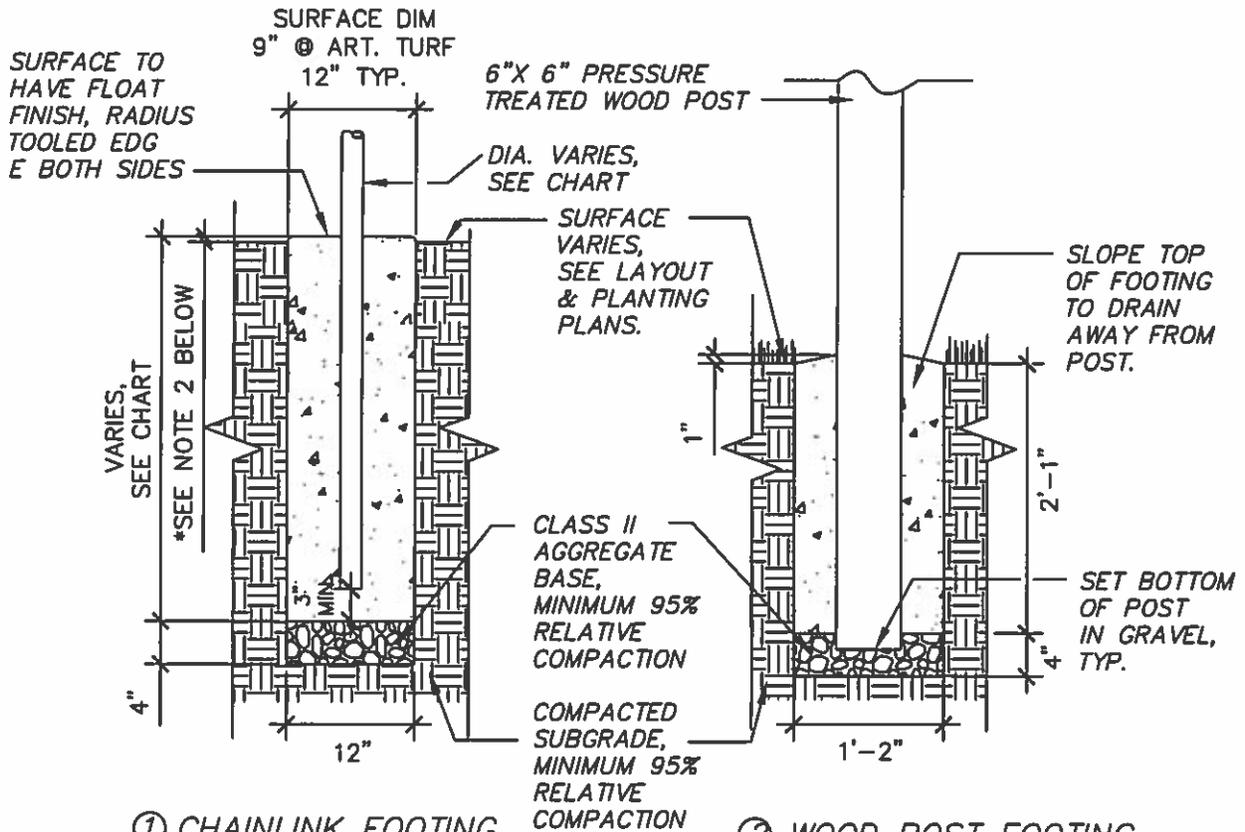
NOTES:

- A. GATE MATERIALS TO MATCH FENCE
- B. PROVIDE SHOP DRAWINGS FOR ALL CHAIN LINK FENCING AND GATES, INCLUDING ALL ACCESSORIES.
- C. SEE CHAIN LINK FENCING NOTES, DETAIL S-29

CHAIN LINK GATE DOUBLE LEAF DETAIL



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>William R. Boudin</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-31
Date: 3/14/16		



NOTES:

- A. ALL FOOTING DETAILS TO BE VERIFIED BY STRUCTURAL ENG.
- B. DIMENSION IS 1/2" AT SEEDED TURF OR COURT SURFACE, 1/2" AT PLANTING AREA.

CHAINLINK FENCE MEMBER DIMENSIONS CHART

4' FENCE	
TERMINAL POST	2"
LINE POST	1 1/2"
FOOTING DEPTH	2'-6"
FOOTING DIA.	12"
6' FENCE	
TERMINAL POST	2"
LINE POST	1 1/2"
FOOTING DEPTH	3'-0"
FOOTING DIA.	12"
8', 10', 16' FENCES	
TERMINAL POST	2"
LINE POST	2"
FOOTING DEPTH	3'-0"
FOOTING DIA.	12"

PER CALTRANS 2006 STANDARD PLAN A85

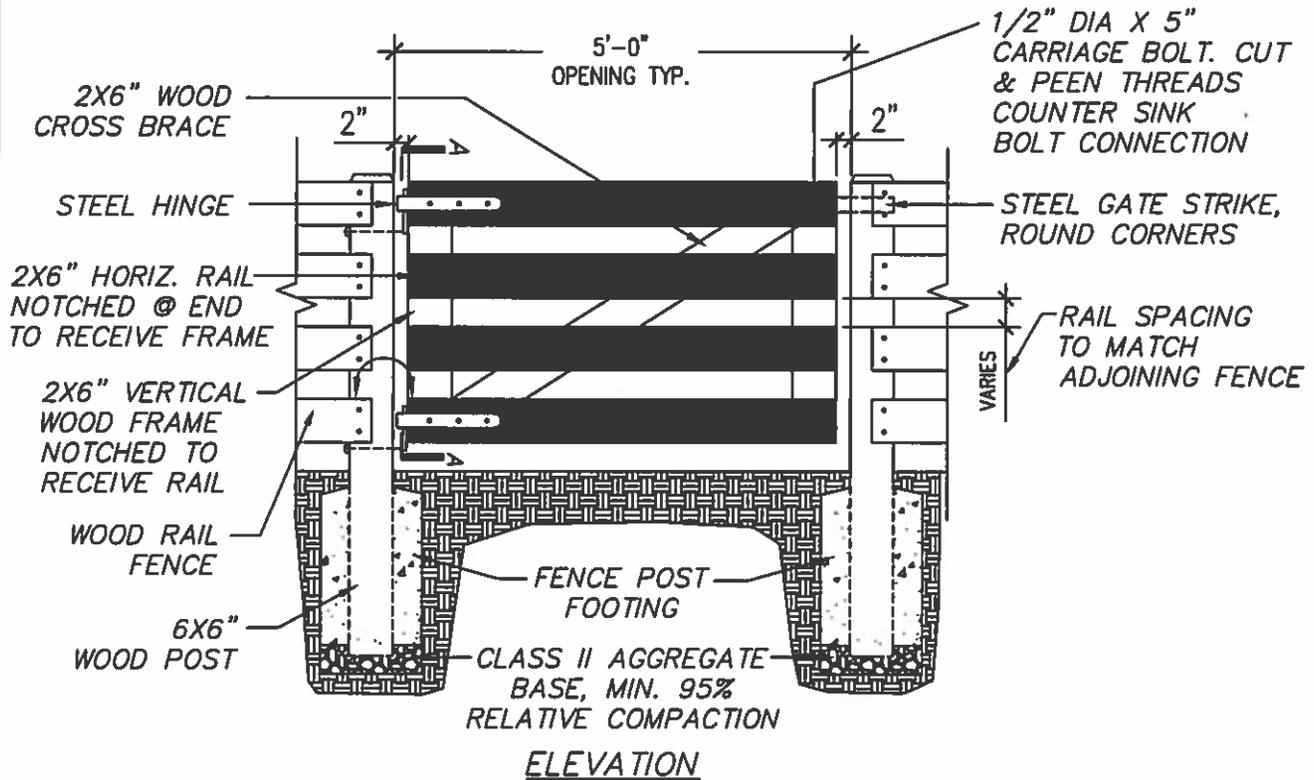
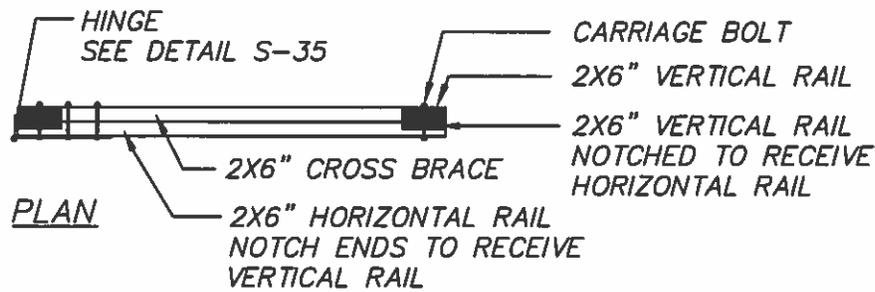
CHAIN LINK GATE POST FOOTING DETAIL



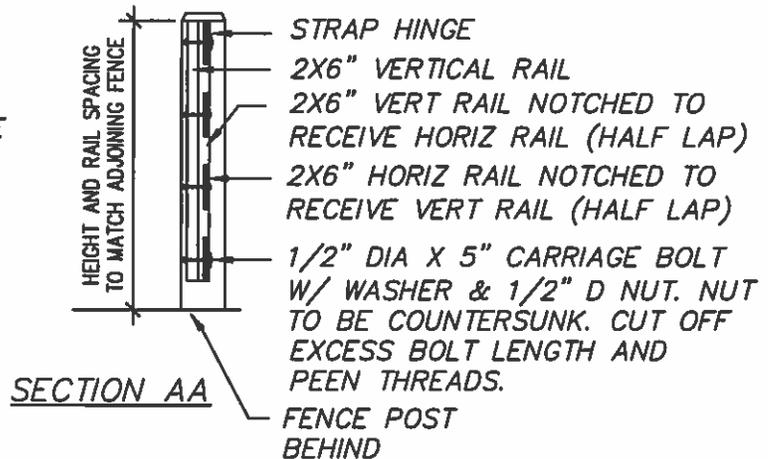
Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Kevin R. Brantley*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016	Scale: NTS		
Revisions			
No.	Date	App.	Description

Scale: NTS
 Drawing S-32



NOTE:
A. PROVIDE SHOP DRAWINGS FOR GATES INCLUDING ALL HARDWARE & ACCESSORIES.



WOOD RAIL GATE PEDESTRIAN DETAIL

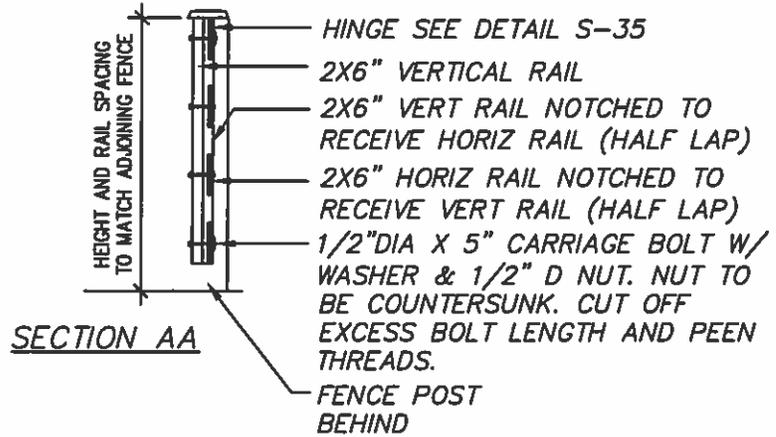


Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *John R. Bantler*
 CITY ENGINEER
 Date: 3/18/16

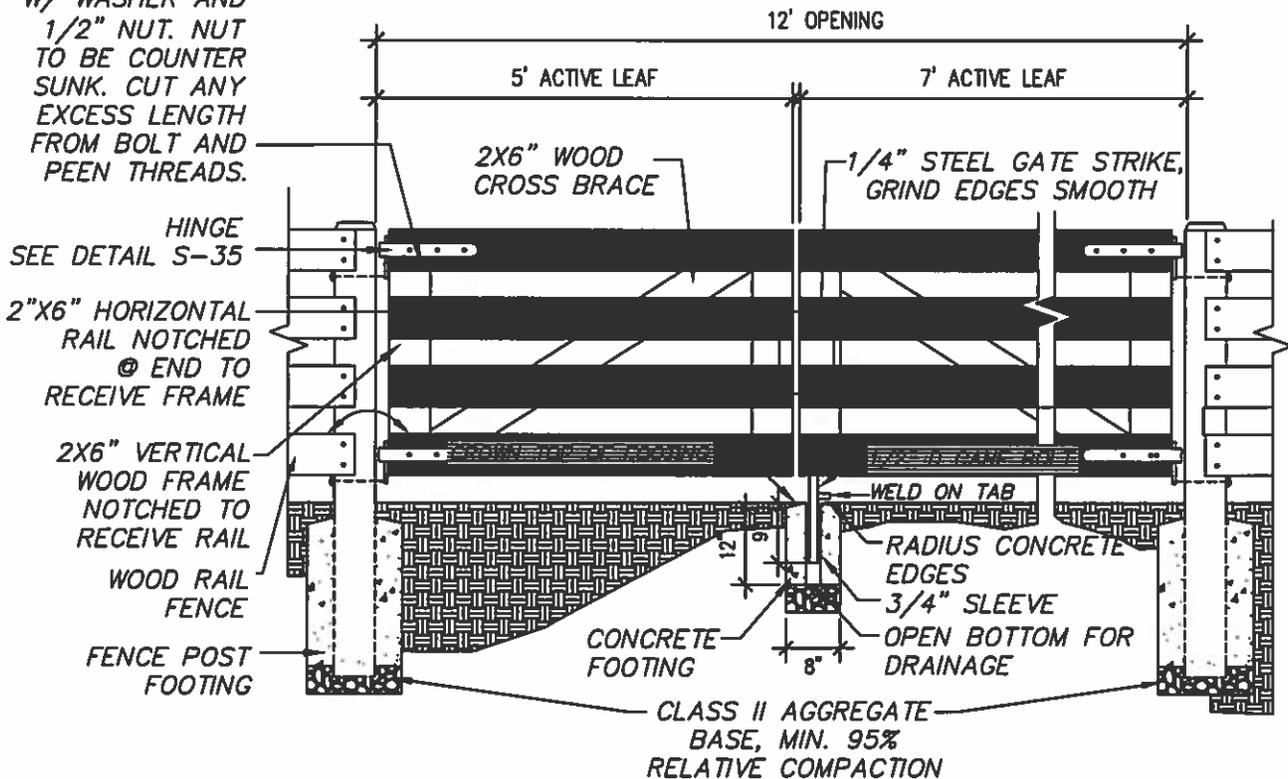
Date: March 2016	Scale: NTS
Revisions	
No.	Date
App.	Description

Scale: NTS
 Drawing S-33

NOTE:
 A. PROVIDE SHOP DRAWINGS FOR GATES INCLUDING HARDWARE & ACCESSORIES.



1/2" DIA X 5" CARRIAGE BOLT W/ WASHER AND 1/2" NUT. NUT TO BE COUNTER SUNK. CUT ANY EXCESS LENGTH FROM BOLT AND PEEN THREADS.



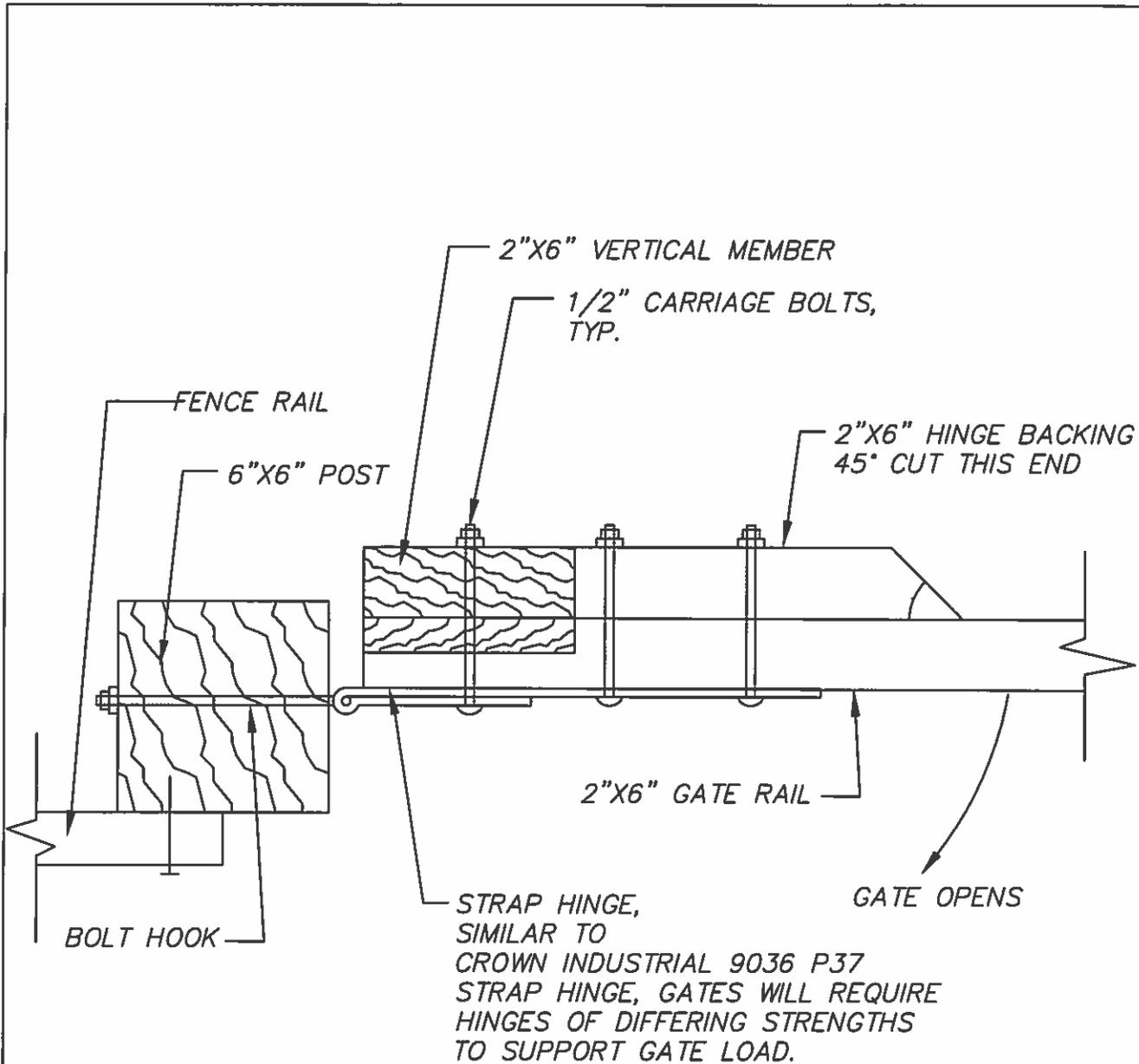
WOOD RAIL GATE PEDESTRIAN AND VEHICLE
 (12' OPENING) DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Theresa R. Bower*
 CITY ENGINEER
 Date: 3/16/16

Date: March 2016	Scale: NTS
Revisions	
No. Date App. Description	

Drawing S-34



PLAN

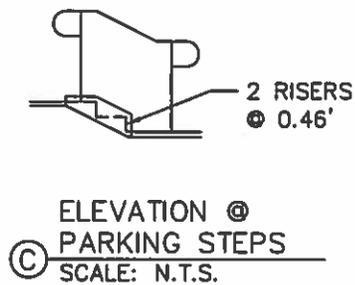
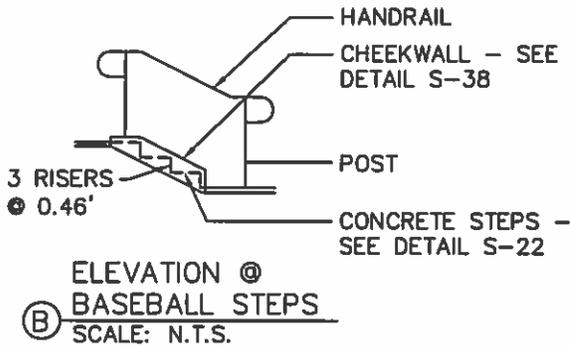
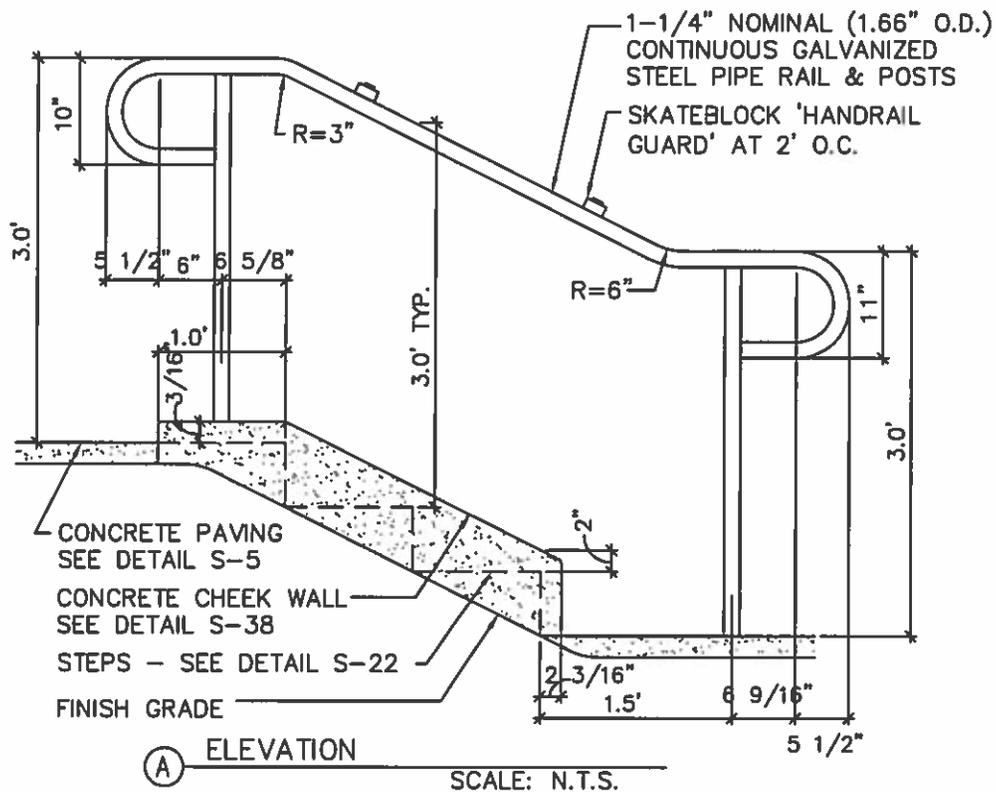
HINGE DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault
 Approved by: *Kevin R. Bentley*
 CITY ENGINEER
 Date: 3/14/16

Date: March 2016		Revisions	
No.	Date	App.	Description

Scale: NTS
 Drawing S-35



NOTES:

- A. SEE PLANS FOR NUMBER OF RISERS & RISER HEIGHT.
- B. SEE DETAIL S-38 FOR SECTION @ POSTS.
- C. ALL METAL COMPONENTS SHALL BE AS SPECIFIED IN METAL NOTES, SEE DETAIL SR-37.
- D. PRIME AND PAINT METAL AS SPECIFIED IN METAL NOTES, DETAIL S-37. COLOR AS SPECIFIED. CONTRACTOR TO PROVIDE COLOR SAMPLE FOR CITY APPROVAL PRIOR TO PAINTING.
- E. CONTRACTOR SHALL ENSURE RIGID INSTALLATION OF HANDRAIL.
- F. RAVENSFORGE SKATE BLOCK 'HANDRAIL GUARD', TEL. (888) 743-3490. INSTALL USING TAMPER PROOF BOLTS PER MANUFACTURER'S RECOMMENDATIONS.



METAL HANDRAIL DETAIL

Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Barbara Beutler</i> CITY ENGINEER	No. Date App. Description	Drawing
Date: 3/14/16		S-36

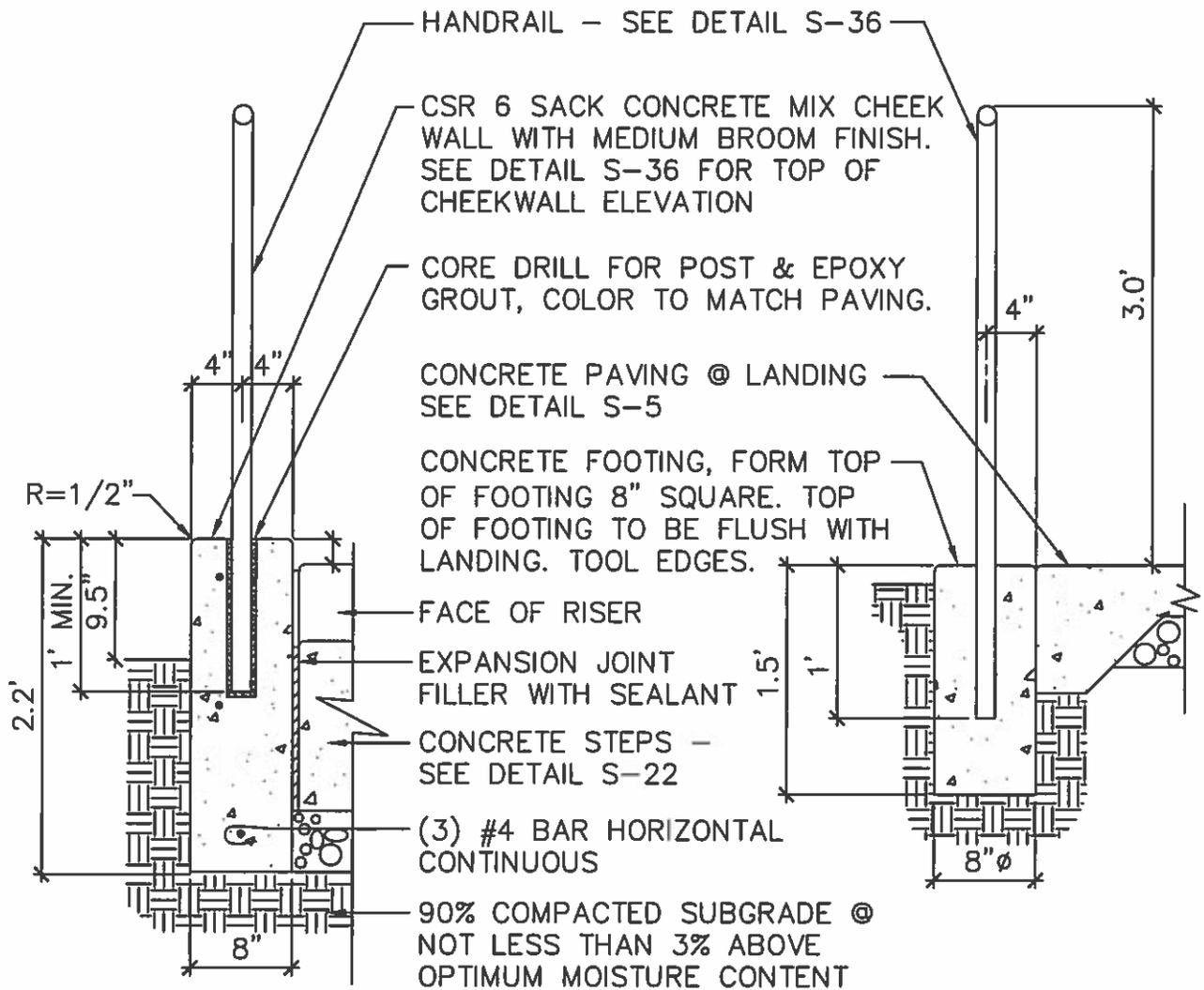
METAL NOTES

1. DRAWINGS AND NOTES ARE INTENDED TO INDICATE DESIGN INTENT AND QUALITY OF WORKMANSHIP AND MATERIALS. CONTRACTOR/FABRICATOR SHALL BE RESPONSIBLE FOR ENSURING THAT METAL WORK IS STRUCTURALLY SOUND FOR THE USE INTENDED. IF DEVIATIONS ARE SUGGESTED, OBTAIN APPROVAL OF THE COUNTY REPRESENTATIVE PRIOR TO FABRICATION.
2. SUBMITTALS:
 - A. SUBMIT SHOP DRAWINGS FOR FENCE & HANDRAILS PRIOR TO FABRICATION.
 - B. SUBMIT CERTIFICATE OF COMPLIANCE FROM FABRICATOR OR MANUFACTURER TO COUNTY REPRESENTATIVE PRIOR TO INSTALLATION, STATING COMPLIANCE WITH CONTRACT DOCUMENTS AND NOTE 1 ABOVE.
3. STEEL SHALL BE FREE OF BLEMISHES, PITTING, AND SEAM MARKS, ROLLER MARKS, TRADE NAMES, AND ROUGHNESS FOR ALL WORK EXPOSED TO VIEW.
4. MATERIALS:
 - A. METAL RAIL FENCE:
 - 1) GALVANIZED STEEL TUBE: DURAGAL BY ONESTEEL, SQUARE HOLLOW TUBING SECTIONS WHICH ARE IN-LINE HOT-DIP GALVANIZED. STEEL SHALL MEET OR EXCEED ASTM A500 GRADE C,
 - 2) GALVANIZED STEEL FLATS: DURAGAL BY ONESTEEL, IN-LINE HOT-DIP GALVANIZED. STEEL SHALL MEET OR EXCEED ASTM A36.
 - B. PIPE FOR HANDRAILS: ASTM A53 SCHEDULE 40 GALVANIZED STEEL PIPE.
 - C. OTHER METAL SHALL BE AS SHOWN ON INDIVIDUAL DETAILS.
5. FIELD VERIFY ALL MEASUREMENTS PRIOR TO FABRICATION.
6. WORK TO BE DONE IN A WORKMAN-LIKE MANNER, TRUE TO LINE, LEVEL, AND WITH ACCURATE ANGLES AND SURFACES. INSTALL ITEMS PLUMB, LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTION OR DEFECTS AND AS DETAILED ON THE DRAWINGS.
7. SHOP FABRICATE ALL ITEMS COMPLETE AND READY FOR INSTALLATION, INSOFAR AS POSSIBLE.
8. WELDING: ALL CONNECTIONS SHALL BE WELDED UNLESS OTHERWISE APPROVED BY THE COUNTY REPRESENTATIVE. PERFORM FIELD WELDING IN ACCORDANCE WITH AWS D1.1. WELDS SHALL BE SMOOTH, CONTINUOUS BEADS, FREE OF EXCESSIVE ROUGHNESS AND SPATTER. GRIND EXPOSED SURFACE WELDS SMOOTH AND FLUSH TO MATCH AND BLEND WITH PARENT METAL SURFACES. RE-WELD TO FILL HOLES; PUTTY NOT PERMITTED.
9. PROTECT METAL FROM DAMAGE TO SURFACE, PROFILE AND SHAPE.

METAL NOTES



Drawn by: SP/ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Brian P. Boustin</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-37
Date: 3/14/16		



(A) CHEEK WALL & TOP POST

(B) BOTTOM POST

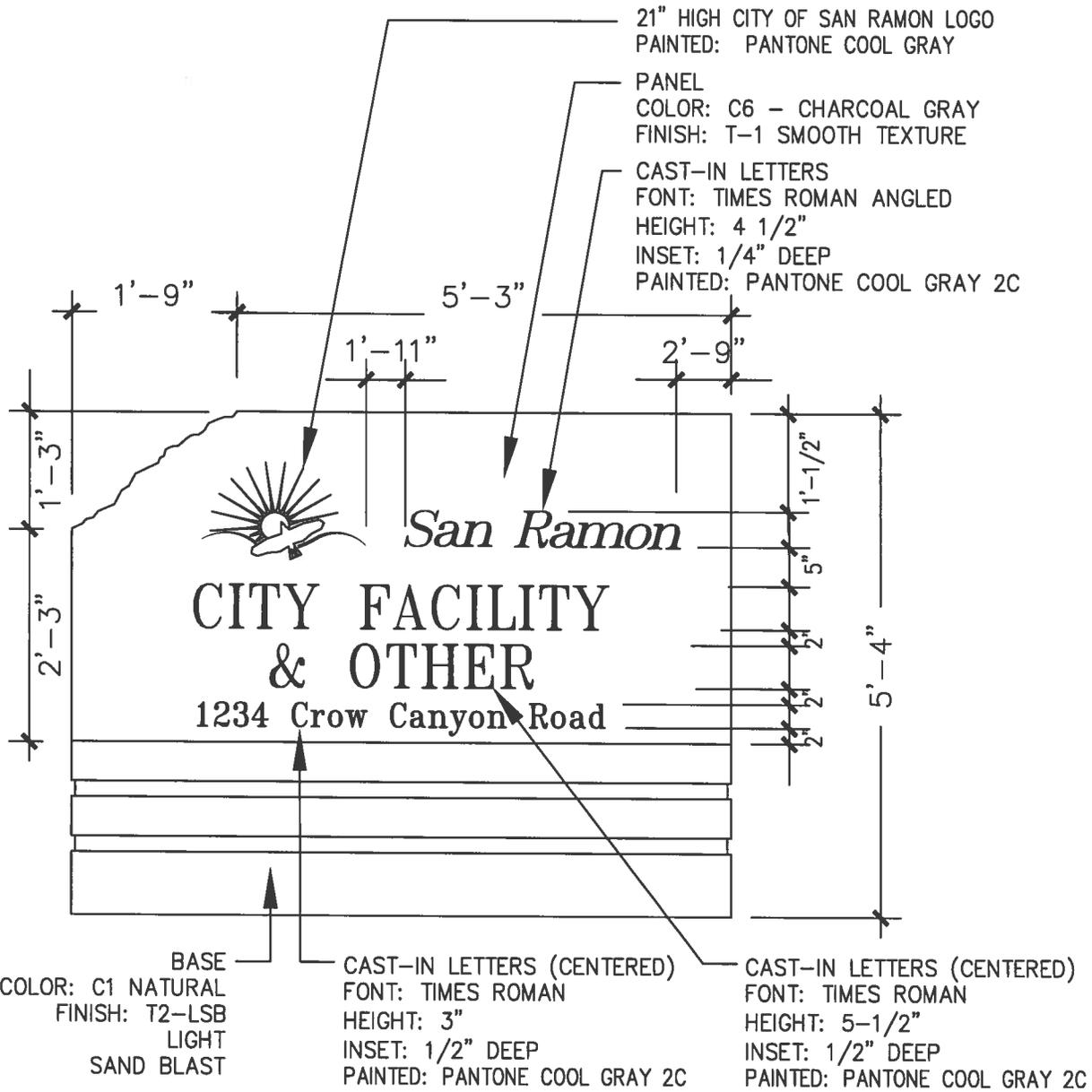
CHEEK WALL & HANDRAIL POSTS DETAIL



Drawn by: SP/ER
 Checked by: Jeff Gault *JG*
 Approved by: *Brian Bantlin*
 CITY ENGINEER
 Date: 3/11/16

Date: March 2016		Revisions	
No.	Date	App.	Description

Scale:
 NTS
 Drawing
 S-38

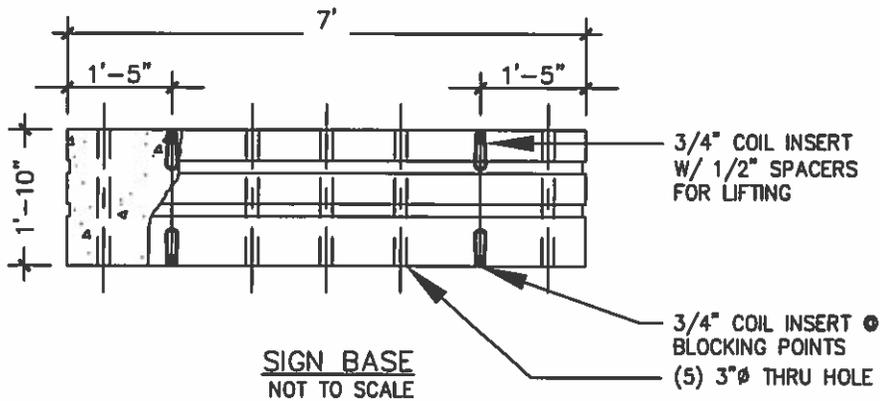
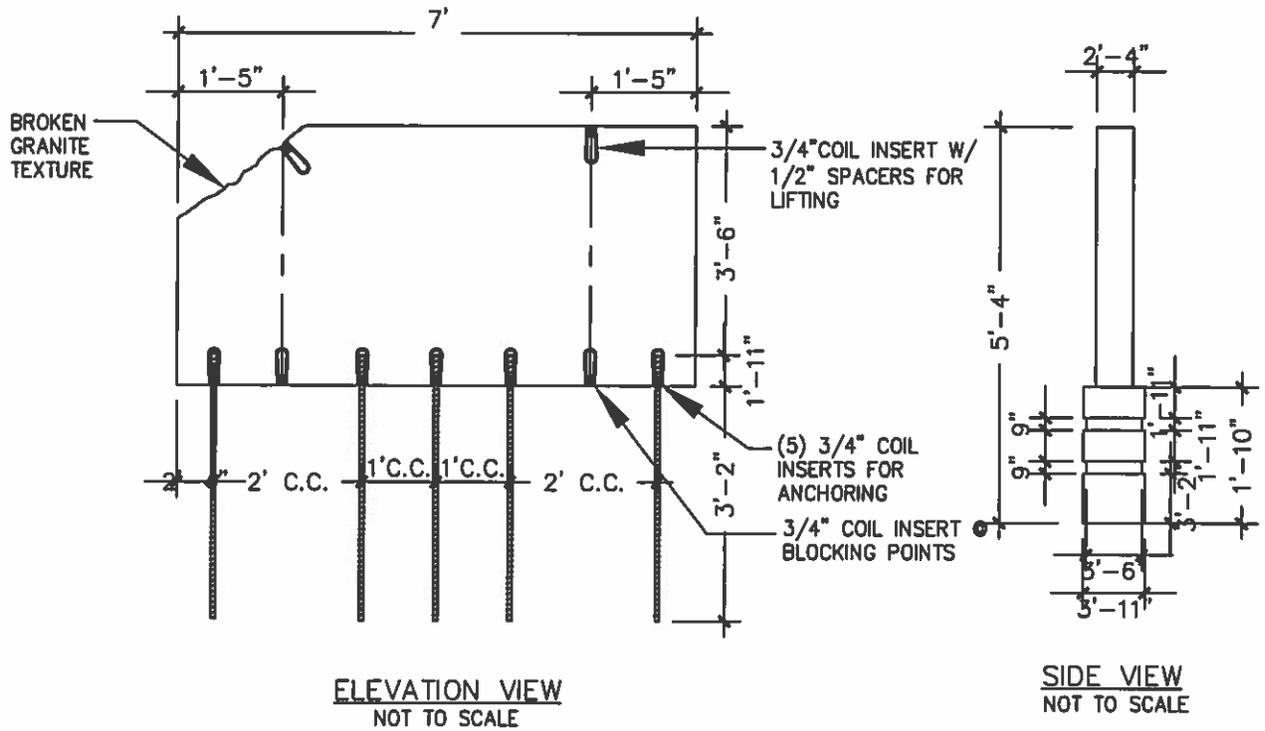


FRONT ELEVATION VIEW
NOT TO SCALE

MONOLITHIC SIGN DETAIL



Drawn by: ER	Date: March 2016	Scale: NTS
Checked by: Jeff Gault	Revisions	
Approved by: <i>Bill R. Bourde</i> CITY ENGINEER	No. Date App. Description	Drawing S-39A
Date: 3/14/16		



MONOLITHIC SIGN DETAIL



Drawn by: ER	Date: March 2016	Scale:
Checked by: Jeff Gault	Revisions	NTS
Approved by: <i>Paul R. Bantler</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-39B
Date: 3/14/16		

NOTES:

1. SIGN SHALL BE A TWO-SIDED PRECAST CONCRETE CONFORMING TO CITY OF SAN RAMON STANDARD PARK MONUMENT SIGN. SIGN SHALL BE MANUFACTURED BY QUICK CRETE PRODUCTS, TEL. (909) 737-6240 (SIGN TO BE PROVIDED BY CITY).
2. CONCRETE TO HAVE STANDARD GLOSS SEALER. ALL EDGES TO HAVE 1/4" MINIMUM RADIUS.
3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY REPRESENTATIVE FOR APPROVAL.
4. INSTALL SIGN ON CONCRETE FOOTING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONCRETE FOOTING TO COMPLY WITH CITY OF SAN RAMON STANDARD DETAILS.
5. APPROXIMATE SIGN WEIGHT 1,764 LBS. APPROXIMATE BASE WEIGHT 1,508 LBS.
6. SIGN FOUNDATION TO BE SET ON PROPERLY COMPACTED AND LEVEL SUBGRADE.

INSTALLATION NOTES:

1. CAST-IN OR CORE DRILL (5) 3"Ø X 18" DEEP GROUT POCKETS INTO FOOTING PER ANCHOR BOLT PATTERN. (SEE PLAN)
2. TAKE (5) 3/4"Ø X 41" LONG MEDIUM STEEL COIL RODS AND THREAD FIVE INCHES INTO (5) 3/4"Ø INSERTS, LEAVING 38" OF COIL ROD EXPOSED.
3. FILL ALL GROUT POCKETS W/ NON-SHRINK GROUT AND POUR EPOXY ON THE FOOTING WHERE SIGN WILL BE PLACED. INSERT SIGN W/ COIL RODS THROUGH SIGN BASE AND INTO GROUT POCKETS.

MONOLITHIC SIGN NOTES



Drawn by: ER	Date: March 2016	Scale:
Checked by: Jeff Gault <i>JG</i>	Revisions	NTS
Approved by: <i>Brian R. Boudin</i>	No. Date App. Description	Drawing
CITY ENGINEER		S-39C
Date: 3/14/14		